Champagne

FEB 03 1988

Honorable Pete V. Domenici
United States Senate
Washington, D.C. 20510

Dear Senator Domenici:

Thank you for your letter of January 14, 1988, regarding EPA's policy for the control of toxic wastewater discharges in the State of New Mexico. In this letter, you raise three points: (1) The relevance of our policy to the unique situations in New Mexico, (2) The mechanisms for public comment on our requirements, and (3) The potential cost involved.

I have looked into this matter, and I would like to assure you that we have previously given careful consideration to all of these areas. Our resulting policy and implementing procedures provide a reasonable and rational approach in addressing potentially toxic discharges. As you know, the Clean Water Act states that "...it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited." EPA's national policy, as well as Region VI's policy, for issuance of National Pollutant Discharge Elimination System (NPDES) permits is designed to support and implement the Act. Implementation of toxic controls is thus proceeding in all states across the country. Copies of EPA's national and our regional policy are enclosed for your reference.

One of the strengths of our regional policy is its flexibility. It allows unique situations (such as exist in New Mexico) to be fully considered. For example, we only assess acuatic toxicity in stream segments designated, through state established water quality standards, for aquatic life habitat (or otherwise specified by the state). Most New Mexico ephemeral streams are not designated for aquatic habitat and will, therefore, not be so evaluated under our policy.

Because of this very need for local flexibility, and because water quality requirements are by definition site specific, EPA made a conscious decision not to publish national regulations in this area. We agree with this concept in that specific national regulations would likely be overly strict in many cases (such as the areas of your concern in New Mexico).

FERGUSON:vmh:Region 6:6W-P:1-29-88:X7170:disk vh4,#13

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Knudson

However, full public participation and opportunity to comment is still obtained in this toxic control effort. Specifically, public involvement is a routine part of the establishment of state water quality standards which are an integral part of our policy as referenced above. In addition, any limitation, treatment, or additional construction necessary to abate toxic conditions would only be required through the issuance of a Federal wastewater discharge permit. Full public participation and opportunity to comment is required prior to issuance of any such permit.

In regard to implementation costs, any additional construction necessary for toxics controls will only be required where human health impacts or aquatic toxic conditions have been verified. Municipal construction of this type necessary would be eligible for Federal grant or loan assistance under the funds authorized by Congress. In addition, major industrial and larger municipal facilities will be asked to do some additional analytical testing to determine the presence or absence of actual in-stream toxicity.

Also in regard to your request, we will be happy, as always, to work directly with the communities in your State. In this regard, we met with all municipalities and industrial facilities in New Mexico that will be affected by EPA's policy in fiscal 1988 (plus Albuquerque and Santa Fe, who will likely not be affected until 1991) on June 30 and July 8, 1987.

Finally, we have received a letter from the city of Albuquerque enclosing a series of comments formulated by an ad hoc association of major New Mexico wastewater dischargers. We have enclosed a point-by-point explanation of these comments for your reference.

I hope the information I have provided is helpful to you and would like to reiterate our assurance that we will be imposing additional toxicity controls only where necessary. If I can provide any additional information, or be of assistance, please let me know.

Sincerely yours,

/s/ Robert E. Layton Jr.

Robert E. Layton Jr., P. E.
Regional Administrater

Enclosures

cc: New Mexico Environmental
Improvement Division

FEB 03 1988

Honorable Ken Schultz
Mayor of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

Dear Mayor Schultz:

Thank you for your letter of December 14, 1987. We are pleased to see that you agree that biomonitoring is useful in identifying toxicity problems, and that you support biomonitoring for effluent monitoring. The national policy focused on control of toxic discharges and the toxicity testing utilized in this process has been under development and implementation for a number of years and embraces dischargers nationwide. It is a well-developed and well-defined program mandated by the Clean Water Act. The following information is provided on a point-by-point basis to clarify the Environmental Protection Agency's (EPA) policy regarding each of the points raised in the enclosure to your letter.

1. The Region VI Third Round Permit Issuance Policy and Implementation Strategy is specifically designed to detect and control toxicity in municipal and industrial effluents after mixing with the receiving water. Toxicity control will be achieved with an integrated approach, combining chemical and biological methods. Biomonitoring will be utilized to indicate a measurable toxic impact of whole effluent on representative aquatic species. EPA has conducted a series of studies investigating the validity of effluent toxicity tests in predicting adverse impact on receiving waters caused by the discharge of effluent toxicity tests in predicting impact of discharges on biological communities. Citations for these studies are available from Region VI.

   The state, through requirements of Section 304(1) of the Clean Water Act and revisions to its Water Quality Management Plan, will address known and suspected toxicities in surface waters. Permits issued by Region VI will adhere to state water quality standards for specific toxicants when these are promulgated.

2. The Region is requiring the use of the best toxicity methods currently developed. These have a well-established database relating to precision and reliability. It is true that the permittee will generally use fathead minnows and Ceriodaphnia for toxicity testing requirements of NPDES permits. The Regional strategy is designed to protect against toxicity under the state established critical low flow condition. The New Mexico Environmental Improvement Division, in Guidelines for Developing Controls for Point Sources of Toxic Substances, defines low flow as the 7Q10, or the 7-day low flow expected to occur in a ten-year period. Failure of a single test does not constitute chronic toxicity. EPA requires that upon failure of a permit toxicity test, the permittee must verify the toxicity. If toxicity is verified then the permittee would be required to achieve toxicity reductions. Additionally, the detection of antagonistic or synergistic toxicities by whole effluent toxicity testing is an integral portion of the Region VI policy designed to assess instream toxicity.

3. All receiving waters support an aquatic community. Toxic control of effluents discharged to intermittent or ephemeral streams is reliant upon the New Mexico State Water Quality Standards or other State requirements to designate segments classified for aquatic habitat. Sections 208, 301, 302, 303, 304, and 305 of the Clean Water Act give primary responsibility to the states for setting water quality standards. EPA's biomonitoring program was designed to address permits written within Region VI on a case-by-case basis, controlling against toxicity of effluents after mixing with the receiving water.

4. The state, not EPA, classifies and provides designated uses for surface waters within the state. This is done through revisions to the state's Water Quality Management Plan, which includes public hearings and public comment opportunities. EPA believes that the toxicity test methods cited are well documented.

5. The decision-making processes upon which toxic control in Region VI are contingent have established modes of public participation. EPA has extensive communication with a permittee before and during National Pollutant Discharge Elimination System (NPDES) permit development regarding biomonitoring. The permit is developed on a case-by-case basis with significant input requested of the permittee. In addition, the permittee and the general public can comment on the permit during the public comment period which is required for all NPDES

permits. The State of New Mexico incorporates public participation into the stream designation process. Development of Region VI's policy reflects the unique situations that occur throughout our five state region.

6. While national policy on control of toxic discharges outlines basic goals and objectives, specific design and implementation of the toxic control program is properly accomplished at the regional level. Promulgation of national standards defining toxic impacts would not provide the flexibility that may be obtained by regional direction of toxic control, implemented on a case-by-case basis. Any NPDES permit issued under the Region VI toxics Third Round Implementation Strategy must be in compliance with state water quality standards and subject to state certification, and as such is developed to reflect local conditions.

7. The Clean Water Act prohibits the discharge of toxics in toxic amounts. We are in agreement that privately owned treatment works (POTWs) and industrial treatment plants were not historically concerned with preventing instream toxicity. Rather, the treatment systems were designed to provide Best Available Technology treatment. It is for this reason that EPA must control instream toxicity through the third round permitting process. Pretreatment programs were developed to protect the treatment plant from upsets due to discharge of pollutants. The integration of the pretreatment program into current third round toxicity control and evaluation is critical. EPA sees the pretreatment programs as a tool that will be used to control the discharge of toxic materials into the treatment system and thence to the receiving waters. While pretreatment has primarily utilized a specific chemical approach, third round provisions will augment toxics control with biomonitoring to provide a direct assessment of instream toxicity.

8. EPA is not preventing the use of chlorine as a disinfectant, nor is the Agency discouraging disinfection of municipal effluents. However, the discharge of acute or chronically toxic instream levels of chlorine is unacceptable. Permittees will be required to dechlorinate or incorporate alternative disinfection to eliminate chlorine toxicity. The State of New Mexico, like EPA, recognizes the necessity to control effluents for chlorine toxicity and has established numerical limits for many waters in their water quality standards that reflect this concern for instream toxicity.

9. The use of fathead minnows and Ceriodaphnia for toxicity tests is desirable because a well documented test protocol exists, a substantial database on organismal response is available, and the tests are performed by numerous laboratories within Region VI, or overnight delivery services. These organisms are distributed throughout the five state region, and in specific cases where these organisms might not be present, other fishes and invertebrates occupy the respective niches. Should the state or permittee request to use a sensitive indigenous species, EPA will work with the state and permittee. In many cases, however, this could result in a tremendous expenditure to the permittee because of the cost involved in culturing organisms that are not commonly utilized in toxicity tests.

10. The quality assurance and quality control necessary to adequately perform the toxicity tests is outlined in the published methods. EPA requires that the permittees develop a complete report, pursuant to requirements outlined in the methods, that provides data which allows the evaluation as to whether adequate quality assurance and quality control procedures were followed. Many of the states in Region VI have the capability to perform toxicity tests. While it is true that few permittees have the capability to presently perform toxicity tests, there are numerous labs accessible by overnight delivery that have the capability. A list of labs that currently perform toxicity tests in Region VI is available from Region VI Permits Branch.

11. The Clean Water Act states that "... it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited." EPA's national policy, as well as Region VI's policy, for issuance of NPDES permits is designed to support and implement the Act. The Clean Water Act requires state promulation of toxic water quality standards. Although Region VI's third round policy is designed to embrace state water quality standards for specific toxicants, it must also comply with narrative standards contained in state water law. EPA is required by regulation (40 CFR Part 122.44(d)(1) to include conditions in permits as necessary to achieve the states' water quality standards as established under Section 303 of the Clean Water Act. The State of New Mexico states, in the water quality standards for Interstate and Intrastate Streams in New Mexico, 1-102 F.:

> "Toxic substances such as, but not limited to, pesticides, herbicides, heavy metals, and organics, shall not be present in receiving

waters in concentrations which will change the ecology of receiving waters to an extent detrimental to man or other organisms of direct or indirect commercial, recreational, or aesthetic value."

Discharge of toxic substances in toxic amounts is then a violation of Federal and State water quality laws.

Region VI policy does not require toxicity testing where no potential for non-attainment exists. Toxic components of discharges will be identified and screened for instream exceedance of EPA Water Quality Criteria. These criteria will function in this regard in the absence of specific state standards. Exceedance of toxic water quality criteria signals potential for non-attainment. Biomonitoring in these cases will allow an assessment of toxic impact.

Our policy is directed at identifying and correcting only those discharges which are resulting in instream toxicity. If you still have concerns over these matters and feel that a meeting is needed, please contact Jack Ferguson of my staff at (214) 655-7170.

I appreciate knowing of your interest in this situation, and I hope this information is helpful to you. If I may be of further assistance, please let me know.

Sincerely yours,
/s/ Robert E. Layton Jr.

Robert E. Layton Jr., P. E.
Regional Administrator

cc: New Mexico Environmental
Improvement Division

bcc: Watson (6W-PM)
McCormick (6W-PM)
Elliott (6W-QS)
Reading File (6W-PM)

1/28/88:WATSON(6W-PM):tn:H-21#10:#226

6W-PM	6W-PI	6W-P	6W
Aalto	Huffman	Ferguson	Knudson

To Jim
From Susan Swenson
Subject 9/2 Response to Quivira

Our response to page 5:

We disagree that Quivira should not be listed for selenium, but we do agree that EPA applied an outdated Federal Water Quality Criterion for livestock watering of 50 ug/l. Instead, the updated criterion that should have been applied is the even more stringent criterion of 5 ug/l.

More recently, there has been discussion that 50 ug/l is insufficient to protect for livestock/wildlife watering. Some EPA Regions are now using 5 ug/l. (Also 5 ug/l would be the number promulgated Federally for deficient State Water Quality Standards).

Also, much of Quivira's response inappropriately discusses primary and secondary drinking water regulatory values which are irrelevant to the use in question.

Our response to page 8

We disagree with the argument that, due to high natural background levels, it cannot be said that Quivira's Ambrosia Lake facility substantially or entirely causes the Arroyo Del Puerto's alleged failure to meet applicable water quality standards

for selenium. Since Quivira discharges into an ephemeral waterbody system, there is no baseline flow containing natural background levels of selenium. Any consistent steady state (in the absence of thunderstorm events) level of selenium would be attributable to Quivira's discharge which is creating flow in a normally dry waterbody. Also, the criteria under discussion are water quality criteria, not sediment criteria, and not soil selenium concentrations.

NM Toxic Criteria

B. The following are the maximum contaminant levels for inorganic chemicals:

Contaminant	Level Milligrams Per Liter
Arsenic	0.05
Barium	1.
Cadmium	0.010
Chromium	0.05
Fluoride	4.0
Lead	0.05
Mercury	0.002
Nitrate (as N)	10.
Selenium	0.01
Silver	0.05

Applies to Segments listed
106 - Jemez River Above S144
All perennial tribs to Rio Puerco except Rio San Jose
107 - Rio San Jose in Cibola County
112 - Rio Ojo Caliente, Rio Vallecito, Rio del Oso, Abiquiu Cr.
116 - Rio Chama above Abiquiu Reservoir
All tribs to Rio Chama above Abiquiu Reservoir
118 - Rio Grande in Bandelier NM & all tribs in Santa Fe Co. exc. Santa Fe R
120 Red River above fish hatchery and all tribs to Rio Grande in Taos & Rio Arriba Co.

203. MAXIMUM CONTAMINANT LEVELS FOR ORGANIC CHEMICALS.-- The following are the maximum contaminant levels for organic chemicals. The maximum contaminant levels for organic chemicals in subsections A and B of this section apply to all community water systems. Compliance with the maximum contaminant levels in subsections A and B is calculated pursuant to Section 305. The maximum contaminant level for total trihalomethanes in subsection C of this section applies only to community water systems which serve a population of 10,000 or more individuals and which add a disinfectant to the water in any part of the drinking water treatment process. Compliance with the maximum contaminant level for trihalomethanes is calculated pursuant to Section 313. Compliance with the maximum contaminant levels in subsection D of this section apply to all community water systems and non-transient non-community water systems.

A. Insecticides:	Level Milligrams per Liter
Endrin (1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8a-octa hydro-1, 4-endo, endo-5, 8-dimethano napthalene)	0.0002
Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer)	0.004
Methoxychlor (1,1,1-Trichloro-2, 2-bis [p-methoxyphenyl] ethane)	0.1
Toxaphene (C_{10} H_{10} Cl_8 - technical chlorinated camphene, 67-69 percent chlorine)	0.005

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)
(Record of item checked above)

TO: Russell Bowen
6W-QS

FROM: Cathy Sisneros
EID

DATE 5/10/90

TIME

SUBJECT 304(l) Short listing of Quivira Mine in New Mexico

SUMMARY OF COMMUNICATION

Cathy said ~~that~~ they (their Secretary of the Health and Envivonment Department) will be sending a letter objecting to our April 14 listing of the Quivira Mine. Their objections are based on administrative procedures (i.e. too short of a comment period and that it should have been listed back in June of 89). Cathy said they are objecting to the selenity issue as they had previously listed it under the long list. Cathy said that EID will be proposing a selenium WQS in the upcoming Triennial revision. The proposed WQS will apply to the receiving stream of Quivira's discharge. This stream is named Poison Canyon and they feel there could also be high natural levels of selenium. This is the reason they didn't short list the Mines.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

Cathy said she would fax a copy of letter today.

INFORMATION COPIES
TO: Neleigh, Pendergast, Ferguson, Kirkpatrick, Knudson, Boss, File

EPA Form 1300-6 (7-72) REPLACES EPA HQ FORM 8300-3 WHICH MAY BE USED UNTIL SUPPLY IS EXHAUSTED.

FEB 0 8 1990

REPLY TO: 6W-PT

Mr. John C. Hall
Piper & Marbury
1200 Nineteenth St., N.W.
Washington, D.C. 20036

Dear Mr. Hall:

Thank you for your letter of January 29, 1990. As we discussed in a previous phone conversation, the New Mexico Environmental Improvement Division (NMEID) is currently looking at the flow data which your client submitted to determine if the current 7Q10 low flow of 0.410 cfs should be changed. Until NMEID completes the review and makes a new determination of the 7Q10, any decision by EPA regarding 304(l) or a revised interpretation of biomonitoring results would be premature at best.

We will be glad to discuss any of the proposed 304(l) decisions or interpretations of the biomonitoring results with your clients when we receive a revised flow from NMEID.

Sincerely yours,

James F. Pendergast
Chief
Toxics Control Section (6W-PT)

cc: Dave Tague, NMEID

bcc: Wooten (6W-PT)
Morton (6W-PT)
Champagne (6W-OS) ✓
Teel (6W-ET)

6W-PT:PENDERGAST:tw:x7175:02/05/90:TW-Pend:nmeid304.(1)

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TO: Honorable William D. Reilly

FROM: John D. Robb

DATE: 7/2/90

TOTAL NUMBER OF PAGES, EXCLUDING THIS PAGE 14

If you do not receive the total number of pages mentioned above or experience difficulty with this transmission, please call (505) 768-7321.

MESSAGE:

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July 2, 1990

By FACSIMILE and FEDERAL EXPRESS

Honorable William D. Reilly
Administrator
U.S. Environmental Production Agency
401 M. Street, S.W.
Washington, D. C. 20460

APPEAL

Quivira Mining does hereby appeal from the June 2, 1990 decision of the Region 6 administrator:

I. to list Quivira Mining Company and an unnamed arroyo/Arroyo del Puerto in the Section 304(L)(1)(B) and (C) lists of toxic pollutants; and

II. promulgating an individual control strategy by the proposed addition of a limit on selenium as a proposed modification of Quivira's NPDES permit.

Quivira appeals from that decision and objects to it on the grounds that the decision is arbitrary, unreasonable, illegal, contrary to the Clean Water Act and its amendments, to EPA's regulations and is otherwise discriminatory and unconstitutional. Among other reasons, it constitutes a deprivation of property of Quivira without due process of law.

With the exception of the constitutional grounds which were not specifically articulated therein, the reasons for Quivira's contentions that the actions of Region 6 are improper were set forth in some detail in the comments by Quivira to the Region's proposed actions which were previously filed herein, all of which comments are expressly adopted and reasserted herein. The decision by Region 6 is based upon conclusions which are unsupported by or contrary to both the facts and the law as described in Quivira's comments. Quivira asserts that the responses by Region 6 to its

comments are inadequate. For example, this is shown primarily by comparing Quivira's plenary comments (not just the summary thereof prepared by Region 6) with the Region's responses. In particular, however, Quivira emphasizes the inadequacy of the responses to Quivira's contentions:

I. that the background of the naturally occurring selenium in the water and other factors indicate that Quivira is not a substantial source or cause of the alleged conditions of the arroyo;

II. that Region 6 failed to follow the CWA and EPA regulations;

III. that merely agreeing to permit Quivira to assert its objections to the listings in the future does not answer its claims that the damage is being inflicted on Quivira now. By branding it as a substantial polluter, it is subjecting Quivira to enormous costs in resisting the proposed individual control strategy, and in trying to get itself removed from the list of detriments and damages which would not have occurred had EPA followed legal and proper procedures in taking the actions it did; and

IV. EPA has an inadequate basis for reaching the conclusion that a .05 mg\l standard for selenium is a fair one to apply to the standard to Quivira, particularly under the facts and circumstances of this case. EPA's reliance on an outdated 1972 standard is confirmed by its decision. The decision ignored evidence submitted by Quivira on the subject. Examples of the type of evidence also ignored by EPA which was readily available to it, are opinions of well known international experts such as Dr. Gerhard N. Schrauzer (and the studies upon which he relies) to the effect that selenium in water is generally not a problem for livestock, that the major problem for livestock is not an excess of selenium but an insufficiency of selenium because it is essential to nutrition, that it requires massive doses of selenium approximately 40 times that of the proposed standard in order to even approach toxicity and that, therefore, a reasonable standard for selenium in water is .25 mg\l. Also available to EPA, had it attempted to update its outmoded 1972 standards, would have been statements such as those of Dr. Frank Anderson, a well qualified doctor of veterinary medicine and livestock expert with special expertise in the geographical area of Quivira's discharge, affirming Dr. Schrauzer's conclusions. Copies of the statements of each of these experts is attached as an example of the fact that EPA should

have had knowledge and information in that both the proposed standard and its application in this case are unnecessary and unreasonable.

Respectfully submitted,

Yours very truly,

RODEY, DICKASON, SLOAN, AKIN & ROBB, P.A.

By John D. Robb
John D. Robb
Attorney for Quivira Mining Company

JRD/mgw
Enclosures

MKA/mgw

STATEMENT OF DR. FRANK ANDERSON
FOR PRESENTATION TO THE WATER QUALITY CONTROL COMMISSION
ON JUNE 13, 1990

My name is Dr. Frank Anderson. I live in Grants, New Mexico and operate the Airport Animal Clinic there. I am a doctor of veterinary medicine having graduated from Kansas State University. I have been licensed for many years to practice veterinary medicine in the State of New Mexico. I am 44 and have practiced in the Grants and Ambrosia Lake are of New Mexico for 15 years. Between one-third and fifty percent of my practice over the years has involved livestock.

I have been a director of the New Mexico Veterinary Association for approximately eight years and I have served as president and past president of that association. I currently serve on the Board of Examiners.

The Ambrosia Lake area, which is part of my practice area, in general has higher quantities of selenium than normal. However, during my years of practice in the area, I have with one possible exception, never encountered a situation where selenium has had any adverse impact upon livestock. In addition to my practice I have consulted from time to time with acknowledged experts on the effects of selenium upon cattle.

My experience as a veterinarian and my study indicates that selenium is not a problem for livestock unless it occurs in excess of two parts per million which is some forty times the .05 mg/l standard, which I understand this Commission is considering. If there had been any problems, of any substantial nature involving the exposure of cattle to selenium in and around Grants and within the Ambrosia Lake area during my time of practice, I am sure I would have heard about it. I think it is safe to say there are no scientifically documented cases of injury to livestock in this area resulting from overdoses of selenium in either foliage or water.

Frank Anderson

STATEMENT FOR THE PUBLIC RECORD
REGARDING WATER QUALITY STANDARDS
FOR INTERSTATE AND INTRASTATE STEAMS IN NEW MEXICO
BY G. N. SCHRAUZER, PROFESSOR OF CHEMISTRY,
UNIVERSITY OF CALIFORNIA, SAN DIEGO,
JUNE 13, 1990

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PREFACE

The author of this report, Gerhard N. Schrauzer, received a Ph.D. degree in chemistry in 1956. Since 1967, he has been a Professor of Chemistry at the University of California, San Diego. His main research interest is in the area of trace elements, notably selenium. He has published numerous papers on the role of this element in human health and disease. During the past 20 years he has organized several international conferences on selenium and has gained international recognition for his research on its cancer-protecting effects. He also conducted studies on the distribution of selenium in the United States and in other countries, determined the selenium content of common foods as well as the dietary intakes of the element in Americans and other populations. In animal experiments, he studied the long-term beneficial and toxic effects of selenium and other trace elements in the drinking water. Because of this expertise, he has been asked to serve as an expert consultant in lawsuits involving human selenium poisoning cases. He is also frequently retained as a consultant by private and governmental agencies.
Dr. Schrauzer founded an "International Selenium Study Group" in 1975 and subsequently the "International Association of Bioinorganic Scientists, Inc.", a chartered, non-profit scientific organization. He is the Editor-in-chief of the journal "Biological Trace Element Research", is an elected member of the American Institute of Nutrition, the American College of Toxicology, the Association of Clinical Scientists and the American Association for Cancer Research. Dr. Schrauzer is the author of 280 original scientific papers and reviews and has authored and edited 3 books.

SUMMARY OF ARGUMENT

The proposed water quality standards for selenium are based on outdated EPA standards and concepts concerning the toxicity and carcinogenicity of selenium. Because they fail to take into account the natural distribution of selenium in New Mexico, enforcement of the proposed standards would prohibit certain types of water use in substantial parts of the State. My opinion is that the proposed standards should be revised upward to .25/mg./l.

INTRODUCTION

In 1985, Kerr McGee closed it Ambrosia Lake uranium mines and placed them on standby statue due to depressed market conditions. The Kerr McGee mining operations were subsequently acquired by Rio Algom Mining Corporation in January, 1989. During this period, although on standby, natural groundwater has continued to be pumped from these mines in order to maintain them for possible future use.

As the standards proposed by the Commission use EPA's guidance criteria for selenium of 0.05 mg/L for livestock watering and the mine effluent contains from 0.15 to 0.25 mg/L, pumping operations may have to cease as water treatment methods for selenium removal to this level are not available. The level of selenium in the effluent reflects the natural groundwater environment; it is not the result of adding selenium to water in the processing operations. Accordingly, adoption of the EPA guidances for selenium could adversely affect the potential uses of ground water in many parts of New Mexico. It will be shown in the following that the low selenium standards being considered by the Commission are based on outdated information.

BACKGROUND INFORMATION

Selenium in vegetation first caused problems in livestock more than a century ago.[1] By 1949, it was established that high selenium regions existed on or near cretaceous outcrops in the Western states.[2]

Coincidentally, selenium is naturally associated with uranium in many sandstone deposits.[3] [4] Although the plants indicate the presence of elevated levels of selenium in the soil, prospectors looked for them in the search for new uranium deposits.[5] Hence, many uranium mines are situated in high-Se regions. A large portion of the entire state of New Mexico is high in selenium and uranium.

ASSESSMENT OF THE EFFECTS OF GROUNDWATER PUMPING FROM AMBROSIA LAKE MINES

The ground water which is pumped out of the Ambrosia Lake uranium mines contains selenium in amounts ranging from 0.15 to 0.25 mg/L, reflecting the selenium mineralization of this area. The water is discharged into an arroyo at the rate of 1,000 gal./min. and flows for approximately 1.5 miles before being absorbed into the ground. A toxicological risk assessment must address the potential toxicity of the effluent water to livestock or wildlife, the safety of the use of the water for irrigation purposes, if applicable, and the long-term environmental impact of the water discharge.

Although selenium poisoning may occur in livestock grazing on forage in high-selenium regions,[6] [7] it curiously is not regulated by a federal standard. In contrast, water selenium levels are strictly regulated by a federal standard, although few animals have ever been poisoned by Se in the water.

Based on my research, I conclude that the water from Ambrosia Lake would be safe for indefinite use for livestock and wildlife, watering or irrigation, and that even a tenfold higher selenium concentration could still be tolerated by cattle for extended periods. There is no real potential danger of selenium toxicity to wild animals or wildfowl resulting from the small stream discharge by Quivira.

Irrigation use of the effluent would likewise not be associated with a significant risk of selenium toxicity, nor would this lead to significant selenium accumulation. Soil normally may contain from 0.1 to 4.3 mg Se per kg.[8] As the Se content of soil in high-Se region may reach 80 mg/kg or more,[9] irrigation use of the water would at most replenish the soil Se levels depleted by the growing plants.

APPEAL FOR A REVISED NEW MEXICO NUMERIC STANDARD FOR SELENIUM

Presently, the same low selenium standard (0.05 mg/L) is proposed for livestock watering as for domestic water supplies. An even lower standard, 0.02 mg/L is proposed for irrigation. The fact that, for arsenic, cadmium, lead, chromium and mercury significantly higher standards are permitted for irrigation and animal use than are permitted for domestic use -- see TABLE I -- suggests a bias against selenium which is presumably dates back to the time when selenium was still considered to be a carcinogen. Indeed, the standard supposedly assures that the lifetime cancer risk attributable to selenium would be less than one per 100,000 exposed persons (see WQCC 88-1, April 25, 1988, p.49). The EPA in establishing its guidance evidently chose to ignore that selenium is no longer considered to be carcinogenic, that it is in fact an essential trace element which is gaining wide attention because of its anticarcinogenic properties. For example, large-scale human selenium supplementation studies are underway in the USA and in China to test its efficacy in the prevention of major forms of human cancer.

TABLE 1. STANDARDS FOR SELECTED INORGANIC CONSTITUENTS IN WATER SUPPLIED FOR DOMESTIC USE, IRRIGATION, AND FOR ANIMAL WATERING USE (ADAPTED FROM DOCUMENT WQCC 88-1)

Element	Domestic	Irrigation	Animal Watering
Selenium	50 ug/L	20 ug/L	50 ug/L
Arsenic	50 ug/L	200 ug/L	200 ug/L
Cadmium	10 ug/L	50 ug/L	50 ug/L
Lead	50 ug/L	100 ug/L	100 ug/L
Chromium	50 ug/L	1,000 ug/L	1,000 ug/L
Mercury	2 ug/L	10 ug/L	10 ug/L

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1. Larry Champagne		
2.		
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REMARKS

I thought you might be interested because of AZ/NM border issues.

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Doug Eberhardt, W-3-2	Phone No. FTS 454-8913

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

NOTICE OF APPROVAL AND DISAPPROVAL

DECISION OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WITH REGARD TO THE LISTS OF WATERS, POINT SOURCES AND POLLUTANTS SUBMITTED BY THE STATE OF ARIZONA UNDER SECTION 304(l) OF THE CLEAN WATER ACT, AS AMENDED BY THE WATER QUALITY ACT OF 1987.

I. DESCRIPTION OF SECTION 304(l) OF THE CLEAN WATER ACT

Section 304(l) of the Clean Water Act (CWA), as amended by the Water Quality Act of 1987, requires every State to develop lists of impaired waters, to identify certain point sources and amounts of pollutants causing toxic impact, and to develop individual control strategies for each point source identified.

Section 304(l) requires the State to submit four lists to the United States Environmental Protection Agency (EPA). The first list must include waters which after application of technology-based effluent limits, cannot reasonably be anticipated to attain or maintain water quality standards for priority pollutants adopted under Section 303(c)(2)(B) of the CWA. (Paragraph (1)(A)(i) of Section 304(l) requires this list.) The second list must include all waters which after application of technology-based effluent limits, cannot reasonably be anticipated to attain or maintain that water quality which will assure protection of public health, public water supplies, agricultural and industrial uses, and the protection and propagation of a balanced population of shellfish, fish and wildlife, and allow recreational activities in and on the water. (Paragraph (1)(A)(ii) of Section 304(l) requires this list.) The third list must include waters which, due entirely or substantially to discharges from point sources, do not meet numeric or narrative water quality standards for the toxic pollutants listed under Section 307(a). (Paragraph (1)(B) of Section 304(l) requires this list.) The fourth list must include point sources which are discharging Section 307(a) pollutant(s) into the waters listed on the list of waters required by paragraph (1)(B) of section 304(l). This list of point sources must also include the amount of pollutant which the point source is discharging into the water. (Paragraph (1)(C) of Section 304(l) requires this list.) Finally, the State must develop and submit an individual control strategy for each point source on the fourth list. Section 304(l)(1)(D).

Arizona. EPA will be developing individual control strategies for those sources on the Section 304(l)(1)(C) list in accordance with Section 304(l) and its implementing regulations.

EPA has determined that the list submitted by ADEQ pursuant to Section 304(l)(1)(A)(i) includes certain waters that do not qualify for inclusion on the (1)(A)(i) list. Therefore, EPA is disapproving ADEQ's listing of those waters on the list. Each of the waters not qualifying for inclusion on the (1)(A)(i) list are identified in Part II.B.2. of this notice. These waters did not qualify for inclusion on the (1)(A)(i) list because either (1) the State of Arizona has not reviewed, revised or adopted water quality standards under Section 303(c)(2)(B) for the pollutant(s) that Arizona identified as the basis for listing the water; (2) impairment of the water has not been shown to be due to Section 307(a) priority toxic pollutants; or (3) the discharge which formed the basis for listing has ceased.

EPA has determined that ADEQ's submission of Dry Lake on its Section 304(l)(1)(A)(ii) list did not adequately support its decision to include this water. Ordinarily, this failure would have been remedied by the State's response to EPA's request for additional information pursuant to 40 C.F.R. §130.10(d)(7)(iv). However, because of the temporary restraining order issued on July 21, 1989 by the Superior Court of the State of Arizona, County of Maricopa, against the State and ADEQ, the State and ADEQ were prohibited from supplying such additional information to EPA with respect to this water. Because of the State's inability to meet the regulatory requirements of 40 C.F.R. §130.10(d)(7)(iv) at this time, EPA, pursuant to 40 C.F.R. §130.10(d)(8), is disapproving ADEQ's listing of Dry Lake on the Section 304(l)(1)(A)(ii) list. This decision is set forth in Part II.C.2. of this notice. However, upon consideration of all existing and readily available information, EPA believes that this water should be listed. Therefore, in conformity with EPA's obligation to implement the requirements of Section 304(l), EPA is today listing this water on the 304(l)(1)(A)(ii) list and will be taking public comment on this listing, as described in more detail below.

EPA has also determined that ADEQ's submission of Dry Lake on its Section 304(l)(1)(B) list and Stone Southwest Corporation (Snowflake Mill facility) on its Section 304(l)(1)(C) list for 2,3,7,8-TCDD (dioxin) did not adequately support its decision to list this water and point source for dioxin. As indicated in the preceeding paragraph, this failure would have been remedied by the State's response to EPA's request for additional information. However, because of the temporary restraining order, the State and ADEQ were prohibited from supplying such additional information to EPA with respect to this water and point source. Because of the State's inability to meet the regulatory requirements, EPA, pursuant to 40 C.F.R. §130.10(d)(8), is disapproving ADEQ's listing of Dry Lake on the Section 304(l)(1)(B) list and Stone

Mini List:

Reach Number	Reach Name	Segment Name
15080301-000	Mule Gulch	Mule Gulch
15070103-007	Hassayampa River	Hassayampa River
15070102-034	Big Bug Creek	Big Bug Creek
15070102-033	Lynx Creek	Lynx Creek
15070102-022	Agua Fria River	Rock Springs
15070102-020	Agua Fria River	Rock Springs
15070102-019	Agua Fria River	Rock Springs
15070102-001	Agua Fria River	Agua Fria River
15070102-000	Agua Fria River	Galena Gulch
15070101-015	Gila River	Gila River
15070101-014	Gila River	Gila River
15070101-010	Gila River	Gila River
15070101-009	Gila River	Gila River
15070101-008	Gila River	Gila River
15070101-007	Gila River	Gila River
15070101-005	Gila River	Gila River
15070101-003	Gila River	Gila River
15070101-001	Gila River	Gila River
15070101-000	Gila River	Painted Rock Res
15060201-000	Verde River	Bitter Creek
15060106-002	Salt River	Salt River
15060106-001	Salt River	Salt River
15060106-000	Cave Creek	Cave Creek
15060103-006	Salt River	Salt River
15060103-005	Pinal Creek	Bloody Tanks/Miami
15060103-004	Salt River	Salt River
15050305-007	Aguirre Wash	Aguirre Wash
15050301-013	Sonoita Creek	Sonoita Creek
15050301-010	Santa Cruz River	Santa Cruz River
15050301-009	Santa Cruz River	Santa Cruz River
15050301-008	Santa Cruz River	Santa Cruz River
15050301-006	Santa Cruz River	Santa Cruz River
15050301-000	Santa Cruz River	Tinaja Wash
15050301-000	Santa Cruz River	Kennedy/Silver Bell Lake
15050301-000	Sonoita Creek	Harshaw Creek
15050203-012	San Pedro River	San Pedro River
15050203-011	San Pedro River	San Pedro River
15050203-009	San Pedro River	San Pedro River
15050203-008	San Pedro River	San Pedro River
15050203-003	San Pedro River	San Pedro River
15050203-001	San Pedro River	San Pedro River
15050202-008	San Pedro River	San Pedro River
15050202-006	San Pedro River	San Pedro River
15050202-005	San Pedro River	San Pedro River
15050202-003	San Pedro River	San Pedro River

Mini List (cont.)

Reach Number	Reach Name	Segment Name
15020008-001	Little Colorado R	Little Colorado R
15020007-012	Puerco River	Puerco River
15020007-011	Puerco River	Puerco River
15020007-009	Puerco River	Puerco River
15020007-008	Puerco River	Puerco River
15020007-007	Puerco River	Puerco River
15020007-005	Puerco River	Puerco River
15020007-003	Puerco River	Puerco River
15020007-002	Puerco River	Puerco River
15020006-003	Puerco River	Puerco River
15020007-001	Puerco River	Puerco River
15020006-001	Puerco River	Puerco River
15020005-003	Silver Creek	Silver Creek
15020005-000	Silver Creek	White Mnt Res
15020001-009	Little Colorado R	Little Colorado R

2. EPA disapproves the State of Arizona's decisions to list several waters on the list (mini list) required by paragraph (1)(A)(i) of Section 304(l) because EPA finds that these waterbodies have not met the criteria for inclusion on the mini list for the reasons set forth below. EPA is soliciting public comment thereon.

EPA interprets the mini list to include "...only those waters where water quality standards with numeric criteria adopted under Section 303(c)(2)(B) for priority pollutants are not achieved, or are not expected to be achieved due either to point or nonpoint sources of pollution on or before February 4, 1989..." See 54 Fed. Reg. 23880 (June 2, 1989) (Preamble). EPA finds that the following waters do not meet the criteria for inclusion on the mini list because the State of Arizona has not adopted numeric water quality criteria pursuant to Section 303(c)(2)(B) for the pollutant(s) which Arizona identified as the basis for listing these waters on the mini list.

Reach Number	Reach Name	Segment Name
Unknown	Dry Lake	Dry Lake
15020015-004	Rio De Flag	Rio De Flag

EPA finds that the following waters do not meet the criteria for inclusion on the mini list because impairment of these waters has not been shown to be due to Section 307(a) priority toxic pollutants. See 54 Fed. Reg. 23880 (June 2, 1989) (Preamble).

Long list (cont.)

Reach Number	Reach Name	Segment Name
15070102-000	Agua Fria River	Galena Gulch
15070101-015	Gila River	Gila River
15070101-014	Gila River	Gila River
15070101-010	Gila River	Gila River
15070101-009	Gila River	Gila River
15070101-008	Gila River	Gila River
15070101-007	Gila River	Gila River
15070101-005	Gila River	Gila River
15070101-003	Gila River	Gila River
15070101-001	Gila River	Gila River
15070101-000	Gila River	Painted Rock Res
15060203-022	East Verde River	East Verde River
15060203-019	Verde River	Verde River
15060203-001	Verde River	Verde River
15060202-059	Granite Creek	Granite Creek
15060202-037	Verde River	Verde River
15060202-025	Verde River	Verde River
15060202-019	Oak Creek	Oak Creek
15060202-000	Verde River	Stoneman Lake
15060202-000	Verde River	Peck's Lake
15060202-000	Verde River	Watson Lake
15060202-000	Verde River	Bitter Creek
15060106-024	Salt River	Apache Lake
15060106-016	Salt River	Apache Lake
15060106-003	Salt River	Saguaro Lake
15060106-002	Salt River	Salt River
15060106-001	Salt River	Salt River
15060106-000	Cave Creek	Cave Creek
15060105-006	Tonto Creek	Tonto Creek
15060103-006	Salt River	Salt River
15060103-005	Pinal Creek	Bloody Tanks/Miami
15060103-004	Salt River	Salt River
15060101-007	Black River	Black River
15060101-000	Black River	Cresent Lake
15060101-000	Black River	Big Lake
15050305-007	Aguirre Wash	Aguirre Wash
15050303-003	Santa Cruz Wash	Santa Cruz Wash
15050301-013	Sonoita Creek	Sonoita Creek
15050301-012	Santa Cruz River	Santa Cruz River
15050301-010	Santa Cruz River	Santa Cruz River
15050301-009	Santa Cruz River	Santa Cruz River
15050301-008	Santa Cruz River	Santa Cruz River
15050301-006	Santa Cruz River	Santa Cruz River
15050301-005	Santa Cruz River	Santa Cruz River
15050301-003	Santa Cruz River	Santa Cruz River

Long list (cont.)

Reach Number	Reach Name	Segment Name
15030202-005	Boulder Creek	Boulder Creek
15030107-003	Colorado River	Colorado River
15030104-018	Colorado River	Colorado River
15030104-018	Colorado River	Colorado River
15030103-000	Sacramento Wash	Sawmill Wash
15020016-013	Little Colorado R.	Little Colorado River
15020016-012	Little Colorado R.	Little Colorado River
15020016-010	Little Colorado R.	Little Colorado River
15020016-008	Little Colorado R.	Little Colorado River
15020016-004	Little Colorado R.	Little Colorado River
15020016-003	Little Colorado R.	Little Colorado River
15020016-001	Little Colorado R.	Little Colorado River
15020015-004	Rio De Flag	Rio De Flag
15020015-000	Canyon Diablo	Kinnikinick L
15020015-000	Canyon Diablo	Ashurst Lake
15020015-000	Canyon Diablo	Upper Lake Mary
15020010-000	Black Canyon	Woods Canyon Lake
15020010-000	Black Canyon	Black Canyon Lake
15020008-020	Little Colorado R.	Little Colorado River
15020008-019	Little Colorado R.	Little Colorado River
15020008-017	Little Colorado R.	Little Colorado River
15020008-015	Little Colorado R.	Little Colorado River
15020008-014	Little Colorado R.	Little Colorado River
15020008-013	Little Colorado R.	Little Colorado River
15020008-005	Little Colorado R.	Little Colorado River
15020008-003	Little Colorado R.	Little Colorado River
15020008-002	Little Colorado R.	Little Colorado River
15020008-001	Little Colorado R.	Little Colorado River
15020008-000	East Clear Creek	Blue Ridge Res.
15020007-012	Puerco River	Puerco River
15020007-011	Puerco River	Puerco River
15020007-009	Puerco River	Puerco River
15020007-008	Puerco River	Puerco River
15020007-007	Puerco River	Puerco River
15020007-005	Puerco River	Puerco River
15020007-003	Puerco River	Puerco River
15020007-002	Puerco River	Puerco River
15020007-001	Puerco River	Puerco River
15020006-003	Puerco River	Puerco River
15020006-001	Puerco River	Puerco River
15020005-015	Silver Creek	Silver Creek
15020005-012	Show Low Creek	Show Low Creek
15020005-003	Silver Creek	Silver Creek
15020005-001	Silver Creek	Silver Creek
15020005-000	Silver Creek	White Mnt. Res.

D. Short List and Source List

1. EPA approves the State of Arizona's decisions to list the following waters and point sources for the pollutants specified on the lists required by paragraphs (1)(B) and (1)(C), respectively, of Section 304(l) because EPA finds that the following waterbodies and point sources have met the criteria for inclusion on these lists.

Segment Name:	Agua Fria
Facility Name:	Luke Air Force Base Wastewater Treatment Plant
NPDES Permit No.:	AZ0110221
Parameter:	Copper (dissolved)
Estimated Maximum Daily Load:	0.69 kg/day
Parameter:	Cyanide
Estimated Maximum Daily Load:	0.06 kg/day
Parameter:	Zinc (dissolved)
Estimated Maximum Daily Load:	215. kg/day

Segment Name:	Santa Cruz River below discharge
Facility Name:	Nogales Wastewater Treatment Plant
NPDES Permit No.:	AZ0020150
Parameter:	Copper (dissolved)
Estimated Maximum Daily Load:	31.9 kg/day
Parameter:	Cyanide
Estimated Maximum Daily Load:	13.8 kg/day

Segment Name	Facility Name	NPDES Permit No.	Parameter	Estimated Maximum Daily Load
1. Santa Cruz River	Pima County Ina Road Wastewater Treatment Plant	AZ0020001	Mercury	0.0769 kg/day
2. a. Salt River	City of Phoenix 91st Avenue Wastewater Treatment Plant	AZ0020524	Pentachlorophenol	16.95 kg/day
			Mercury	0.25 kg day
			Endosulfan	0.013 kg/day
			Heptachlor	0.045 kg/day
			Thallium	142.56 kg/day
			Aldrin	0.014 kg/day
b. Gila River	same as 2.a.	same as 2.a.	same as 2.a.	same as 2.a.
3. a. Salt River	City of Phoenix 23rd Avenue Wastewater Treatment Plant	AZ0020559	Pentachlorophenol	5.5 kg/day
			Mercury	0.05 kg/day
			Endosulfan	0.0098 kg/day
			Heptachlor	0.0092 kg/day
			Thallium	20.7 kg/day
			Aldrin	0.0126 kg/day
			Dieldrin	0.0034 kg/day
			Beryllium	35.3 kg/day
b. Gila River	same as 3.a.	same as 3.a.	same as 3.a.	same as 3.a.
4. Dry Lake	Stone Southwest Corporation	No permit	2,3,7,8-TCDD	0.00028 kg/day
"	Snowflake Mill Facility		Cadmium	6.1 kg/day
			Chromium	3.2 kg/day
			Copper	1.5 kg/day
			Lead	1.0 kg/day

tion will be made available to the public in the same manner as today's decision, and will include a brief description of subsequent steps in the Section 304(l) process. Such final Agency action will constitute promulgation by EPA of the lists that it is not approving today.

VI. AVAILABILITY OF RECORD

The administrative record containing EPA's documentation on its decisions on approval and disapproval is on file and may be inspected at the EPA, Region IX office between the hours of 9:00 a.m and 4:00 p.m., Monday through Friday except holidays. To make arrangements to examine the administrative record, contact the person named in Part VI. of this notice..

For additional information about Section 304(l), see EPA's publication Final Guidance for Implementation of Requirements Under Section 304(l) of the Clean Water Act as Amended (March 1988), and final regulations under Section 304(l) published at 54 Fed. Reg. 246 (Jan. 4, 1989) and 54 Fed. Reg. 23868 (June 2, 1989).

Copies of these documents and of Section 304(l) may be obtained by writing or calling the EPA contact person named below.

KEN GREENBERG (W-5-1)
EPA REGION IX
215 FREMONT STREET
SAN FRANCISCO, CA 94105
TELEPHONE: (415) 974-9748

7/31/89
Date

Harry Seraydarian
Harry Seraydarian, Director
Water Management Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202

May 2, 1989

REPLY TO: 6W-QT

MEMORANDUM

SUBJECT: Comments on New Mexico's Final 304(l) List

FROM: David Neleigh
Chief
Technical Section (6W-QT)

TO: Russell L. Bowen
Chief
State Programs Section (6W-QS)

The following are my staffs' comments:

1) I disagree with New Mexico's decision to remove the following segments off the preliminary short list:

   a) York Canyon Creek - This was removed due to insufficient ambient data. If there was cause to put it on the preliminary list, a lack of data does not justify removing it from the short list. Further study seems necessary.

   b) Whitewater Creek - This was removed on the basis of the contention that the Chino permit may already be as stringent as possible. I disagree with this reason.

   c) Red River - Bioassay data for the effluent demonstrated chronic toxicity. This seems sufficient reason to retain the Red River on the short list.

   d) Rio Grande below Las Cruces - If industrial contributions to the Las Cruces STP were being managed adequately under the Pretreatment Program, there would not be metal exceedances in the effluent. Seems to me it should be retained on the short list.

   e) Rio Grande - Las Cruces to Texas Border - Chronic toxicity was identified at the Sunland Park Station. As the cause is unknown, it seems this should remain on the short list pending further investigation. More ambient water quality data below the point sources should be collected.

f) Rio San Jose - from Bluewater Creek to Rinconada Creek - Attainable uses in artificially created perennial streams require protection under New Mexico's General Standards (which includes a narrative for toxic substances). The recommendation to evaluate Quiveras Ambrosia Lake permit for a selenium limit based on DMR data seems to be sufficient reason to retain this unclassified segment on the list.

g) Arroyo Chico - Attainable uses in artificially created perennial streams require protection under New Mexico's General Standards (which includes a narrative for toxic substances). The selenium exceedances from the mine DMRs for the livestock and wildlife watering use seem adequate reason to retain this unclassified segment on the short list.

2) It is recommended that Salado Creek be put on the mini list.

3) In the case of Kim-Me-Ni-Oli Valley, an ephemeral reach of the Chaco River, the State states that the water body was referred to the mini list. However, after reviewing the mini list, this water body was not found.

4) I feel strongly that the San Juan River at Bloomfield should be retained on the short list as, according to designated fishable use of the stream, fish consumption needs consideration. This status should apply until discharge data are generated to show if arsenic is being contributed by the refinery.

5) From a study which we participated with the State in, it was evident that Big Arsenic Springs, which is a groundwater seep which surfaces and flows for a short distances, and then flows into the Rio Grande, is toxic. The reason for this toxicity was not determined, and their are no point source discharges present. Reference the attached 10/30/84 memo to the EID. I have also attached an Administrative Record Checklist to be used in addressing the concern to the state that this water body should be placed on the long list.

Attachments

WATERBODY Big Arsenic Springs, Rio Grande Basin

DISAPPROVALS OF DECISIONS NOT TO LIST

____ **A. A(i) list:** EPA has found that the state inappropriately failed to list this water under the criteria of §304(l)(1)(A)(i).

____ The water is not reasonably expected to attain or maintain the water quality standard (developed under 303(c)(2)(B)) for the following toxic pollutant(s):

Mini List

_____

_____

The data supporting this determination can be found at:

(Title) _____

_____ (Page) _____

Comments:

✓ **B. A(ii) list:** EPA has found that the state inappropriately failed to list this water under the criteria of §304(l)(1)(A)(ii). The water is not reasonably expected to attain or maintain that water quality which shall assure protection of public health, public water supplies, agricultural and industrial uses, and the protection and propagation of a balanced population of shellfish, fish and wildlife, and allow recreational activities in and on the water.

Long List

The data supporting this determination can be found at:

(Title) Letter (10-30-84) from Nelugh (EPA) to Sowden (EID). (Page) _____

Comments:

Letter presents test results from ERL-Duluth. Big Arsenic Springs water was used as control. This resulted in near complete mortality to Ceriodaphnia (test organism), which indicates ambient toxicity.

10-30 84

Mr. Carl Souder
Groundwater Section, New Mexico
Environmental Improvement Division
P.O. Box 968-Crown Bldg.
Santa Fe, New Mexico 87504-0968

Dear Mr. Souder:

The purpose of this letter is to transmit test results for the Molycorp effluent bioassays conducted by ERL-Duluth. We apologize for the delay in supplying you the data. The Duluth laboratory has been deluged by a number of these requests and must balance these with other research priorities. We received the laboratory report (enclosed) today and wish to describe the results in order to facilitate interpretation.

On July 23, 1984, samples were collected from Molycorp (NM0022306) tailings pond outfalls 001 and 002. Water was also collected from Big Arsenic Springs to be used in diluting effluents to desired effluent concentrations. Samples were shipped to ERL-Duluth and arrived on July 25, 1984. The tests were begun on that day and were completed on August 1, 1984. Chronic toxicity was evaluated by testing survival and reproduction of the organism Ceriodaphnia affinis/dubia.

Effluent concentrations of 100%, 30%, 10%, 3% and 1% were tested in both cases. The control consisted of 100% Big Arsenic Springs water. An additional control using ERL-Duluth pond water was also run, since it is established that Ceriodaphnia survive and reproduce well in this water.

The results show that dissolved oxygen and pH conditions were suitable in all treatments. Survival and reproduction of Ceriodaphnia in the pond water control was excellent. However, survival in the Big Arsenic Springs control water were 0% and 10%, showing that this water is somehow toxic to the test organisms. The reason for the mortality is unknown. It is either because the spring water contains toxic levels of pollutants, or the chemical make up of the water is insufficient for survival and reproduction. For example, from the chemical tests that your agency ran, it was evident that the level of dissolved solids were low (conductivity=200) which may have caused chronic metabolic problems.

The 100% effluent resulted in 70% survival and 10% survival for outfalls 001 and 002, respectively. Reproduction was also better in the 001 effluent. For reasons that are not clear, survival and reproduction were better at certain concentrations of effluents (10% and 30%). This may be because the

effluent waters supply more dissolved ions, and thus promote survival. At any rate, the combined chemistry favors survival and reproduction more than the Big Arsenic Springs water itself. The precise reason for this phenomenon is a matter of conjecture. It may be that the Ceriodaphnia is not an adequate test organism here.

Perhaps at some time in the future we can perform a chronic-type test using another species. Please contact Philip Crocker of my staff at (214)767-9909 regarding this possibility, or if you have any questions on the results.

Sincerely,

/S/

David W. Neleigh
Chief, Technical Section, 6W-QT

cc: David Tague
Chief, Surveillance Section, SWQB

Enclosures

Champagne

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202

NOV 22 1988

REPLY TO: 6E-SA

MEMORANDUM

SUBJECT: Review of STORET Water Quality Data in New Mexico to Identify Possible 304(l) Waterbodies

FROM: James E. Stiebing
Chief
Surveillance Branch (6E-S)

TO: Robert B. Elliott
Chief
Water Quality Management Branch (6W-Q)

In support of the 304(l) process of identifying waterbodies impaired by toxic pollutants we reviewed STORET ambient water quality data for New Mexico. Lists of waterbodies with exceedances of water quality criteria for priority pollutants were developed. Attached is a description of the methodology used to review the data and the resultant list of waterbodies with exceedances of the defined water quality criteria.

If you have any questions concerning our data review please contact Willie Lane of my staff at X5-2289.

Attachment

cc: R. Bowen (6W-QS)
D. Neleigh (6W-QT)

METHODOLOGY FOR IDENTIFYING EXCEEDANCES OF WATER QUALITY CRITERIA

Objective

Identification of streams, lakes and reservoirs in New Mexico which are not supporting water quality criteria for priority pollutants. This was done in support of the 304(l) process of identifying waterbodies impaired by toxic pollutants.

Procedure

Ambient water quality data collected by the USGS and the New Mexico Environmental Improvement Division was retrieved from the STORET water quality database. Most state agency data was from the fixed station monitoring network. Data collected by the state agencies during short term surveys is not always stored in the STORET system. Priority pollutant data from October 1983 to the present was retrieved and evaluated.

Using the STORET "Stand" program data values were compared against an upper limit criteria. The protocol discussed in the 305(b) guidance to identify waterbodies not supporting designated uses was used to identify waterbodies impacted by toxics. Ambient water quality data was compared with toxics criteria. A waterbody was classified as impacted by toxics if:

- o criteria were exceeded more than 25% of the time,

or

- o criteria were exceeded 11 to 25% of the time and the mean of the samples at that station exceeded the criteria.

Use of Remarked Data

Often there are remark codes associated with water quality data stored in STORET. Generally the remark codes indicate that the parameter present was below the detection limit with the detection limit being stored. For the purposes of the analysis remarked data was considered to have a value of zero. Thus, in the analysis data values with remark codes were not considered to have exceeded criteria and were set to zero in order to calculate the mean of the parameter.

Criteria for Assessments

Criteria used in the assessments were obtained from state water quality standards and the EPA "Gold Book", Quality Criteria for Water 1986. Gold book criteria were used only in the absence of appropriate state water quality standards. Criteria used were aquatic life criteria (chronic) and human health (fish and water ingestion).

For those chemicals in which exceedances of criteria were detected the method detection limit was evaluated. Method detection limits were taken from Federal Register, 40 CFR Part 136 for GC approved procedures. When the method detection limit was greater than the criteria the data was reevaluated using the detection limit. Use of the detection limit is more defensible as it guards against cases where the detection limit was stored without remark codes to identify it as a detection limit.

Table 1 lists chronic aquatic life criteria for priority pollutants detected in New Mexico. Table 2 lists human health criteria for priority pollutants detected. Waterbodies classified as possibly impacted by toxics are included in Tables 3 and 4.

Analysis of Metals Data

Dissolved rather than total metals data was evaluated. The reason for this is the criteria is more appropriate for dissolved data. Dissolved metals data was collected by USGS but not the state agencies.

In the case of some metals it has been shown that there is a relationship between water hardness (as $CaCO_3$) and metal toxicity. In an attempt to allow for variations in hardness, a minimum mean hardness level of 100 mg/L was established using STORET data. All parameters with hardness dependent criteria were then evaluated using a criteria calculated from this 100 mg/L hardness value. If an exceedence of the criteria was detected at this level a determination of mean hardness at that station was made using STORET hardness values. The parameter criteria for this mean hardness was calculated and the station was reevaluated against the adjusted criteria.

USGS versus State Monitoring Data

As described above, dissolved metals data was collected by USGS only. Hence exceedances of metals criteria are not based on state monitoring data. Exceedances of criteria for non-metal priority pollutants in New Mexico are based on state monitoring data.

Analysis of Available Fish Data

Available fish data was analyzed using FDA criteria. There are FDA edible fish criteria for aldrin, dieldrin, chlordane, kepone, DDT, endrin, heptachlor, mirex, toxaphene and total PCBs. No exceedances of FDA criteria were detected in New Mexico.

Sample Size

No attempt was made in this analysis to define a minimum sample size as a restriction for inclusion to the lists. While it is recognized that a small sample size may be less definitive in establishing a stream as impaired it is believed that such information may be of value to the user.

Table 1. Chronic Aquatic Life Criteria for Toxics Detected in New Mexico.

Priority Pollutant	State Standard (ug/L)	EPA Chronic Life Criteria (ug/L)[a]	Detection Limit (ug/L)[b]
Arsenic		190	
Copper		*	
Lead		*	
Mercury		(0.012)	0.2
Selenium		5.0	
Silver		(0.12)	0.2
Zinc		*	
Nickel		*	

Table 2. Human Health Criteria for Toxics Detected in New Mexico.

Pollutant	State Standard (ug/L)	EPA Human Health Criteria (ug/L)[c]	Detection Limit (ug/L)[b]
Selenium	10		
Nickel		13.4	
Arsenic	50		
Lead	50		
Silver	50		
Mercury	2		

a) Chronic Aquatic Life Criteria. EPA 440/5-86-001.1986.
b) Detection Limit using GC Analysis Method. 40 CFR Part136.1984.
c) Human Health Criteria for Fish and Water Ingestion. EPA 440/5-86-001.1986.
* Hardness dependent criteria.
() Criteria Lower Than Detection Limit.

Table 3. NEW MEXICO STATIONS WITH EXCEEDENCES OF HUMAN HEALTH CRITERIA FOR DISSOLVED METALS.

STATION LOCATION	STATION	CHEMICAL	CRITERIA	CRITERIA EXCEEDANCES	% EXCEEDANCES	STATION MEAN	GREATEST VALUE	VIOLATION MEAN
RIO PAGUATE BLW JACKPILE MINE NEAR LAGUNA	8349800	Se	10.000	1 / 4	25	17	61	
SEC 5 TSE BENITA WASH AT MCKINLEY MINE NEAR GALLUP	35387108584010	Se	10.000	1 / 1	100	37	37	
CHACO RIVER NEAR WATERFLOW	09367950	Se	10.000	1 / 3	33	15.7	42	
SAN JUAN RIVER NEAR FRUITLAND	09367540	Ni	13.400	1 / 2	50	22.5	44	
RED RIVER NEAR QUESTA	08265000	Ni	13.400	1 / 1	100	200	200	

Table 4. NEW MEXICO STATIONS WITH EXCEEDENCES OF FRESHWATER AQUATIC CRITERIA FOR DISSOLVED METALS.

STATION LOCATION	STATION	CHEMICAL	CRITERIA	CRITERIA EXCEEDANCES	% EXCEEDANCES	STATION MEAN	GREATEST VALUE	VIOLATION MEAN
RIO PAGUTE BELOW JACKPILE MINE NEAR LAGUNA	08349800	Se	5.000	1 / 4	25	17	61	
PECOS RIVER AT RED BLUFF	08407500	Hg	0.200	7 /15	47	.26	0.8	0.41
PUERCO RIVER AT GALLUP	09395500	Se	5.000	1 / 1	100	37	37	
CANADIAN RIVER ABOVE NEW MEXICO-TEXAS STATE LINE	07227140	Hg	0.200	4 / 9	44	0.24	0.9	0.425
ANIMAS RIVER AT FARMINGTON	09364500	Hg	0.200	4 /14	29	0.25	1.4	0.625
SAN JUAN RIVER AT SHIPROCK	09368000	Hg	0.200	4 /14	29	0.21	0.6	0.475
CHACO RIVER NEAR WATERFLOW	09367950	Se	5.000	1 / 3	33	15.67	42	
		Hg	0.200	1 / 3	33	0.23	0.4	
SAN JUAN RIVER NEAR FRUITLAND	09367540	Pb	3.200	1 / 2	50	4.5	8	
	09367540	Hg	0.200	1 / 2	50	0.2	0.3	
CANADIAN RIVER NEAR SANCHEZ	07221500	Ag	0.200	1 / 4	25	1.0	1.0	
	07221500	Hg	0.200	3 / 8	38	0.16	0.3	0.267
RIO GRANDE FLOODWAY AT SAN MARCIAL	08358400	Ag	0.200	2 / 7	29	1.27	3.0	2.0
RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL	08358300	Pb	3.200	3 / 9	33	3.11	10.0	6.0
RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA	08354800	Pb	3.200	1 / 2	50	4.0	5.0	
RED RIVER NEAR QUESTA	08265000	Cu	14.000	1 / 1	100	510	510	
	08265000	Ni	187.000	1 / 1	100	200	200	
	08265000	Zn	125.000	8 /18	50	299	2600	542.5
RED RIVER BELOW QUESTA	08266500	Zn	125.000	4 /15	27	82.5	160	126
LATIR R.5-SANGRE DE CHRISTO GRANT	364808105274510	Ag	0.200	1 / 1	100	12.0	12.0	
LATIR CREEK OUTFLOW LAKE 9	08254400	Ag	0.200	1 / 1	100	6.0	6.0	
LATIR CREEK OUTFLOW LAKE 2	08254425	Ag	0.200	1 / 1	100	7.0	7.0	

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Table 1 lists priority pollutants for which exceedances of chronic water criteria were detected. Table 2 lists priority pollutants for which exeedances of water and fish consumption criteria were detected. Waterbodies classified as possibly impacted by toxics are included in Appendix 2.

Analysis of Metals Data

Dissolved rather than total metals data was evaluated. The reason for this is the criteria is more appropriate for dissolved data. Dissolved metals data was collected by USGS but not the state agencies.

In the case of some metals it has been shown that there is a relationship between water hardness (as $CaCO_3$) and metal toxicity. In an attempt to allow for variations in hardness, a minumum mean hardness level of 100 mg/L was established using STORET data. All parameters with hardness dependent criteria were then evaluated using a criteria calculated from this 100 mg/L hardness value. If an exceedence of the criteria was detected at this level a determination of mean hardness at that station was made using STORET hardness values. The parameter criteria for this mean hardness was calculated and the station was reevaluated against the adjusted criteria.

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Lead		*	
Mercury		(0.012)	0.2
Selenium		5.0	
Silver		(0.12)	0.2
Zinc		*	
Nickel		*	

Table 2. Priority Pollutants Evaluated for Human Health Criteria For Toxics in New Mexico.

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Nickel		13.4	
Arsenic	50		
Lead	50		
Silver	50		
Mercury	2		

a) Chronic Aquatic Life Criteria. EPA 440/5-86-001.1986.
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PECOS RIVER AT RED BLUFF	08407500	Hg	0.200	7 /15	47	.26	0.8	0.41
PUERCO RIVER AT GALLUP	09395500	Se	5.000	1 / 1	100	37	37	
CANADIAN RIVER ABOVE NEW MEXICO-TEXAS STATE LINE	07227140	Hg	0.200	4 / 9	44	0.24	0.9	0.425
ANIMAS RIVER AT FARMINGTON	09364500	Hg	0.200	4 /14	29	0.25	1.4	0.625
SAN JUAN RIVER AT SHIPROCK	09368000	Hg	0.200	4 /14	29	0.21	0.6	0.475
CHACO RIVER NEAR WATERFLOW	09367950	Se	5.000	1 / 3	33	15.67	42	
		Hg	0.200	1 / 3	33	0.23	0.4	
SAN JUAN RIVER NEAR FRUITLAND	09367540	Pb	3.200	1 / 2	50	4.5	8	
	09367540	Hg	0.200	1 / 2	50	0.2	0.3	
CANADIAN RIVER NEAR SANCHEZ	07221500	Ag	0.200	1 / 4	25	1.0	1.0	
	07221500	Hg	0.200	3 / 8	38	0.16	0.3	0.267
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RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL	08358300	Pb	3.200	3 / 9	33	3.11	10.0	6.0
RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA	08354800	Pb	3.200	1 / 2	50	4.0	5.0	
RED RIVER NEAR QUESTA	08265000	Cu	14.000	1 / 1	100	510	510	
	08265000	Ni	187.000	1 / 1	100	200	200	
	08265000	Zn	125.000	8 /18	50	299	2600	= 542.5
RED RIVER BELOW QUESTA	08266500	Zn	125.000	4/7 /15	3/27	82.5	160	126
LATIR R.S-SANGRE DE CHRISTO GRANT	364808105274510	Ag	0.200	1 / 1	100	12.0	12.0	
LATIR CREEK OUTFLOW LAKE 9	08254400	Ag	0.200	1 / 1	100	6.0	6.0	

LATIR CREEK OUTFLOW LAKE 2	08254425	Ag	0.200	1 / 1	100	7.0	7.0

NEW MEXICO STATIONS WITH EXCEEDENCES OF HUMAN HEALTH CRITERIA FOR DISSOLVED METALS.

STATION LOCATION	STATION	CHEMICAL	CRITERIA	CRITERIA EXCEEDANCES	% EXCEEDANCES	STATION MEAN	GREATEST VALUE	VIOLATION MEAN
RIO PAGUATE BLW JACKPILE MINE NEAR LAGUNA	8349800	Se	10.000	1 / 4	25	17	61	
SEC 5 TSE BENITA WASH AT MCKINLEY MINE NEAR GALLUP	353871065840 10	Se	10.000	1 / 1	100	37	37	
CHACO RIVER NEAR WATERFLOW	09367950	Se	10.000	1 / 3	33	15.7	42	
SAN JUAN RIVER NEAR FRUITLAND	09367540	Ni	13.400	1 / 2	50	22.5	44	
RED RIVER NEAR QUESTA	08265000	Ni	13.400	1 / 1	100	200	200	

ATTACHMENT

NATIONAL BIOACCUMULATION STUDY DIOXIN RESULTS FOR FISH COLLECTED IN ARKANSAS, LOUISIANA, OKLAHOMA AND TEXAS

AUGUST 19, 1988

Includes 1 NM Site -00

BIOACCUMULATION STUDY RESULTS FOR ARKANSAS
AUGUST 19, 1988

SITE: MISSISSIPPI RIVER NEAR ARKANSAS CITY
LATITUDE: 33 33 27 LONGITUDE: 91 14 15
EPISODE #: 2015 SAMPLED: 11-17-84
FISH: 3 CARP (whole fish)
TEQ: 5.54 ppt 2378 TCDD: 4.73 ppt

SITE: MISSISSIPPI RIVER NEAR ARKANSAS CITY
LATITUDE: 33 33 27 LONGITUDE: 91 14 15
EPISODE #: 2015 SAMPLED: 11-17-84
FISH: 3 CRAPPIE (whole fish)
TEQ: 1.67 ppt 2378 TCDD: 1.43 ppt

SITE: RED RIVER AT INDEX, AR
LATITUDE: 33 33 07 LONGITUDE: 94 02 28
EPISODE #: 2016 SAMPLED: 5-22-85
FISH: 2 SUCKER (fillet)
TEQ: 2.31 ppt 2378 TCDD: 1.69 ppt

SITE: RED RIVER AT INDEX, AR
LATITUDE: 33 33 07 LONGITUDE: 94 02 28
EPISODE #: 2016 SAMPLED: 5-22-85
FISH: 2 SUCKER (whole fish)
TEQ: 6.11 ppt 2378 TCDD: 4.17 ppt

SITE: SULFUR RIVER AT TEXARKANA, AR
LATITUDE: 33 14 32 LONGITUDE: 93 59 58
EPISODE #: 2017 SAMPLED: 5-31-85
FISH: 1 CARP (fillet)
TEQ: 0.07 ppt 2378 TCDD: 0 ppt

SITE: SULFUR RIVER AT TEXARKANA, AR
LATITUDE: 33 14 32 LONGITUDE: 93 59 58
EPISODE #: 2017 SAMPLED: 5-31-85
FISH: 1 CARP (whole fish)
TEQ: 1.07 ppt 2378 TCDD: 0.66 ppt

SITE: ARKANSAS RIVER NEAR VAN BUREN, AR
LATITUDE: 35 20 56 LONGITUDE: 94 17 54
EPISODE #: 2023 SAMPLED: 7-22-84
FISH: SPOTTED BASS (fillet)
TEQ: 0 ppt 2378 TCDD: 0 ppt

SITE: ARKANSAS RIVER NEAR VAN BUREN, AR
LATITUDE: 35 20 56 LONGITUDE: 94 17 54
EPISODE #: 2023 SAMPLED: 7-22-84
FISH: CARP (whole fish)
TEQ: 0.06 ppt 2378 TCDD: 0 ppt

TEQ = TCDD equivalent concentration, a measure of toxicity due to all chlorinated dibenzodioxin and dibenzofuran isomers in terms of the most toxic isomer, 2378 TCDD, in parts per trillion (ppt).

SITE: ARKANSAS RIVER NEAR LITTLE ROCK, AR
LATITUDE: 34 26 41 LONGITUDE: 92 06 38
EPISODE #: 3060 SAMPLED: 11-17-86
FISH: 2 FLATHEAD CATFISH (whole fish)
TEQ: 0 ppt 2378 TCDD: 0 ppt

SITE: ARKANSAS RIVER NEAR LITTLE ROCK, AR
LATITUDE: 34 26 41 LONGITUDE: 92 06 38
EPISODE #: 3060 SAMPLED: 11-17-86
FISH: 2 SMALLMOUTH BUFFALO(whole fish)
TEQ: 1.68 ppt 2378 TCDD: 1.21 ppt

SITE: BAYOU DE LOUTRE, AR
LATITUDE: 33 12 28 LONGITUDE: 92 43 00
EPISODE #: 3061 SAMPLED: 12-31-86
FISH: 4 BOWFIN (fillet)
TEQ: ppt 2378 TCDD: ppt

SITE: BAYOU DE LOUTRE, AR
LATITUDE: 33 12 28 LONGITUDE: 92 43 00
EPISODE #: 3061 SAMPLED: 12-31-86
FISH: 1 SUCKER (UNK SPECIE(whole fish)
TEQ: 2.19 ppt 2378 TCDD: 0 ppt

SITE: ARKANSAS RIVER BELOW PINE BLUFF, AR
LATITUDE: 34 10 09 LONGITUDE: 91 43 56
EPISODE #: 3062 SAMPLED: 11-06-86
FISH: 7 BLUE CATFISH (whole fish)
TEQ:38.16 ppt 2378 TCDD: 33.86 ppt

SITE: NORTH SYLAMORE CREEK AT FIFTY-SIX, AR
LATITUDE: 35 56 33 LONGITUDE: 92 07 05
EPISODE #: 3073 SAMPLED: 4-23-87
FISH: 2 SMALLMOUTH BASS (fillet)
TEQ: 0.03 ppt 2378 TCDD: 0 ppt

SITE: NORTH SYLAMORE CREEK AT FIFTY-SIX, AR
LATITUDE: 35 56 33 LONGITUDE: 92 07 05
EPISODE #: 3073 SAMPLED: 4-23-87
FISH: 3 SUCKER (UNK SPECIE(whole fish)
TEQ: 0.48 ppt 2378 TCDD: 0.3 ppt

SITE: ROLLING FORK RIVER, AR
LATITUDE: 33 57 17 LONGITUDE: 94 21 49
EPISODE #: 3077 SAMPLED: 4-09-87
FISH: 3 REDHORSE SUCKER (whole fish)
TEQ: 0 ppt 2378 TCDD: 0 ppt

TEQ = TCDD equivalent concentration, a measure of toxicity due to all chlorinated dibenzodioxin and dibenzofuran isomers in terms of the most toxic isomer, 2378 TCDD, in parts per trillion (ppt).

SITE: ROLLING FORK RIVER, AR
LATITUDE: 33 57 17 LONGITUDE: 94 21 49
EPISODE #: 3077 SAMPLED: 4-09-87
FISH: 1 FLATHEAD CATFISH (fillet)
TEQ: 0 ppt 2378 TCDD: 0 ppt

SITE: BAYOU METO BELOW JACKSONVILLE, AR
LATITUDE: 34 50 39 LONGITUDE: 92 07 20
EPISODE #: 3078 SAMPLED: 3-06-87
FISH: 1 BLACK CRAPPIE (fillet)
TEQ: 24.34 ppt 2378 TCDD: 23.1 ppt

TEQ = TCDD equivalent concentration, a measure of toxicity due to all chlorinated dibenzodioxin and dibenzofuran isomers in terms of the most toxic isomer, 2378 TCDD, in parts per trillion (ppt).

BIOACCUMULATION STUDY RESULTS FOR LOUISIANA
AUGUST 19, 1988

SITE: MISSISSIPPI RIVER NR ST. FRANCISVILLE
LATITUDE: 30 45 30 LONGITUDE: 91 23 45
EPISODE #: 2532 SAMPLED: 8-9-85
FISH: 1 LARGEMOUTH BASS (fillet)
TEQ: 0.85 ppt 2378 TCDD: 0.82 ppt

SITE: MISSISSIPPI RIVER NR ST. FRANCISVILLE
LATITUDE: 30 45 30 LONGITUDE: 91 23 45
EPISODE #: 2532 SAMPLED: 8-9-85
FISH: 1 CARP (whole fish)
TEQ: 9.89 ppt 2378 TCDD: 6 ppt

SITE: TANGIPAHOA RIVER NEAR ROBERT, LA
LATITUDE: 30 30 23 LONGITUDE: 90 21 42
EPISODE #: 2544 SAMPLED: 7-25-85
FISH: 2 BLACKTAIL REDHORSE(whole fish)
TEQ: 0.09 ppt 2378 TCDD: 0 ppt

SITE: CALCASIEU RIVER AT MOSS LAKE, LA
LATITUDE: 30 04 LONGITUDE: 93 12
EPISODE #: 3063 SAMPLED: 5-07-87
FISH: 5 SEA CATFISH (whole fish)
TEQ: 3.22 ppt 2378 TCDD: 1.5 ppt

SITE: CALCASIEU RIVER AT MOSS LAKE, LA
LATITUDE: 30 04 LONGITUDE: 93 12
EPISODE #: 3063 SAMPLED: 5-07-87
FISH: 3 SPOTTED SEA TROUT (fillet)
TEQ: 0.43 ppt 2378 TCDD: 0 ppt

SITE: LAKE PONTCHARTRAIN, LA
LATITUDE: 30 01 LONGITUDE: 90 01
EPISODE #: 3064 SAMPLED: 4-04-87
FISH: 8 SPOTTED SEA TROUT (fillet)
TEQ: 0 ppt 2378 TCDD: 0 ppt

SITE: MISSISSIPPI RIVER AT PORT ALLEN, LA
LATITUDE: 30 16 LONGITUDE: 91 08
EPISODE #: 3065 SAMPLED: 3-26-87
FISH: 3 FLATHEAD CATFISH (whole fish)
TEQ: 2.85 ppt 2378 TCDD: 1.78 ppt

SITE: MISSISSIPPI RIVER AT PORT ALLEN, LA
LATITUDE: 30 16 LONGITUDE: 91 08
EPISODE #: 3065 SAMPLED: 3-26-87
FISH: 3 BIGMOUTH BUFFALO (fillet)
TEQ: 2.23 ppt 2378 TCDD: 1.83 ppt

TEQ = TCDD equivalent concentration, a measure of toxicity due to all chlorinated dibenzodioxin and dibenzofuran isomers in terms of the most toxic isomer, 2378 TCDD, in parts per trillion (ppt).

SITE: MISSISSIPPI RIVER AT UNION, LA
LATITUDE: 30 04 LONGITUDE: 91 01
EPISODE #: 3066 SAMPLED: 4-09-87
FISH: 7 BLUE CATFISH (whole fish)
TEQ: 5.72 ppt 2378 TCDD: 4.62 ppt

SITE: OUACHITA RIVER AT MONROE, LA
LATITUDE: 32 27 LONGITUDE: 92 07
EPISODE #: 3080 SAMPLED: 2-11-87
FISH: 5 LARGEMOUTH BASS (fillet)
TEQ: 1.04 ppt 2378 TCDD: 1.03 ppt

SITE: OUACHITA RIVER AT MONROE, LA
LATITUDE: 32 27 LONGITUDE: 92 07
EPISODE #: 3080 SAMPLED: 2-11-87
FISH: 3 CARP (whole fish)
TEQ: 5.86 ppt 2378 TCDD: 3.62 ppt

SITE: LAKE PROVIDENCE, LA
LATITUDE: 32 30 LONGITUDE: 91 15
EPISODE #: 3082 SAMPLED: 2-12-87
FISH: 5 LARGEMOUTH BASS (fillet)
TEQ: 0.1 ppt 2378 TCDD: 0 ppt

SITE: LAKE PROVIDENCE, LA
LATITUDE: 32 30 LONGITUDE: 91 15
EPISODE #: 3082 SAMPLED: 2-12-87
FISH: 3 CARP (whole fish)
TEQ: 1.12 ppt 2378 TCDD: 0 ppt

SITE: BAYOU BON IDEE, LA
LATITUDE: 32 40 LONGITUDE: 91 43
EPISODE #: 3083 SAMPLED: 2-12-87
FISH: 3 BLACK BULLHEAD (whole fish)
TEQ: 0.53 ppt 2378 TCDD: 0 ppt

SITE: BAYOU BON IDEE, LA
LATITUDE: 32 40 LONGITUDE: 91 43
EPISODE #: 3083 SAMPLED: 2-12-87
FISH: 5 LARGEMOUTH BASS (fillet)
TEQ: 0 ppt 2378 TCDD: 0 ppt

SITE: BAYOU D'INDE, LA
LATITUDE: 30 07 LONGITUDE: 93 10
EPISODE #: 3086 SAMPLED: 5-07-87
FISH: 3 BLACK DRUM (fillet)
TEQ: 0.06 ppt 2378 TCDD: 0 ppt

TEQ = TCDD equivalent concentration, a measure of toxicity due to all chlorinated dibenzodioxin and dibenzofuran isomers in terms of the most toxic isomer, 2378 TCDD, in parts per trillion (ppt).

SITE: BAYOU D'INDE, LA
LATITUDE: 30 07 LONGITUDE: 93 10
EPISODE #: 3086 SAMPLED: 5-07-87
FISH: 4 SEA CATFISH (whole fish)
TEQ: 5.87 ppt 2378 TCDD: 0 ppt

SITE: WHAM BRAKE, LA
LATITUDE: 32 35 LONGITUDE: 91 56
EPISODE #: 3087 SAMPLED: 2-13-87
FISH: 5 CARP (whole fish)
TEQ: 150.61 ppt 2378 TCDD: 117.89 ppt

SITE: WHAM BRAKE, LA
LATITUDE: 32 35 LONGITUDE: 91 56
EPISODE #: 3087 SAMPLED: 2-13-87
FISH: 2 WHITE CRAPPIE (fillet)
TEQ: 22.06 ppt 2378 TCDD: 13.11 ppt

SITE: BAYOU ANACOCO, LA
LATITUDE: 34 11 LONGITUDE: 93 35
EPISODE #: 3088 SAMPLED: 5-08-87
FISH: 8 CHANNEL CATFISH (whole fish)
TEQ: 14.53 ppt 2378 TCDD: 13.69 ppt

SITE: BAYOU ANACOCO, LA
LATITUDE: 34 11 LONGITUDE: 93 35
EPISODE #: 3088 SAMPLED: 5-08-87
FISH: 6 BLUEGILL (fillet)
TEQ: 1.62 ppt 2378 TCDD: 1.4 ppt

SITE: DUDGEMONA RIVER, HODGE, LA
LATITUDE: 32 03 LONGITUDE: 92 28
EPISODE #: 3092 SAMPLED: 4-30-87
FISH: 8 WARMOUTH (fillet)
TEQ: 0 ppt 2378 TCDD: 0 ppt

SITE: DUDGEMONA RIVER, HODGE, LA
LATITUDE: 32 03 LONGITUDE: 92 28
EPISODE #: 3092 SAMPLED: 4-30-87
FISH: 5 CARP (whole fish)
TEQ: 6.94 ppt 2378 TCDD: 2.11 ppt

TEQ = TCDD equivalent concentration, a measure of toxicity due to all chlorinated dibenzodioxin and dibenzofuran isomers in terms of the most toxic isomer, 2378 TCDD, in parts per trillion (ppt).

BIOACCUMULATION STUDY RESULTS FOR NEW MEXICO
AUGUST 19, 1988

SITE: RIO MORA NEAR TERRERO, NM
LATITUDE: 35 46 38 LONGITUDE: 105 39 27
EPISODE #: 3074 SAMPLED: 11-12-87
FISH: 9 BROWN TROUT (fillet)
TEQ: 0 ppt 2378 TCDD: 0 ppt

BIOACCUMULATION STUDY RESULTS FOR OKLAHOMA
AUGUST 19, 1988

SITE: WASHITA RIVER NEAR DURWOOD, OK
LATITUDE: 34 14 03 LONGITUDE: 96 58 32
EPISODE #: 2026 SAMPLED: 9-5-84
FISH: WHITE CRAPPIE (fillet)
TEQ: 0.01 ppt 2378 TCDD: 0 ppt

SITE: WASHITA RIVER NEAR DURWOOD, OK
LATITUDE: 34 14 03 LONGITUDE: 96 58 32
EPISODE #: 2026 SAMPLED: 9-5-84
FISH: CARP (whole fish)
TEQ: 1.28 ppt 2378 TCDD: 1.17 ppt

SITE: KIAMICHI RIVER NEAR BIG CEDAR, OK
LATITUDE: 34 38 18 LONGITUDE: 94 36 45
EPISODE #: 2027 SAMPLED: 8-16-84
FISH: CARP (whole fish)
TEQ: 0.68 ppt 2378 TCDD: 0.46 ppt

SITE: KIAMICHI RIVER NEAR BIG CEDAR, OK
LATITUDE: 34 38 18 LONGITUDE: 94 36 45
EPISODE #: 2027 SAMPLED: 8-16-84
FISH: LARGEMOUTH BASS (fillet)
TEQ: 0 ppt 2378 TCDD: 0 ppt

SITE: LITTLE RIVER NEAR GOODWATER, OK
LATITUDE: 33 57 LONGITUDE: 94 35
EPISODE #: 3076 SAMPLED: 12-03-86
FISH: 5 CHANNEL CATFISH (whole fish)
TEQ: 0.87 ppt 2378 TCDD: 0.39 ppt

SITE: LITTLE RIVER NEAR GOODWATER, OK
LATITUDE: 33 57 LONGITUDE: 94 35
EPISODE #: 3076 SAMPLED: 1-27-87
FISH: 5 SPOTTED BASS (fillet)
TEQ: 0 ppt 2378 TCDD: 0 ppt

SITE: KAW RESERVOIR, OK
LATITUDE: 36 52 LONGITUDE: 96 56
EPISODE #: 3079 SAMPLED: 11-10-86
FISH: 6 WHITE BASS (fillet)
TEQ: 0.13 ppt 2378 TCDD: 0 ppt

SITE: KAW RESERVOIR, OK
LATITUDE: 36 52 LONGITUDE: 96 56
EPISODE #: 3079 SAMPLED: 11-10-86
FISH: 5 CARP (whole fish)
TEQ: 0.47 ppt 2378 TCDD: 0.34 ppt

TEQ = TCDD equivalent concentration, a measure of toxicity due to all chlorinated dibenzodioxin and dibenzofuran isomers in terms of the most toxic isomer, 2378 TCDD, in parts per trillion (ppt).

SITE: ARKANSAS RIVER AT WEBER FALLS, OK
LATITUDE: 35 41 LONGITUDE: 95 14
EPISODE #: 3089 SAMPLED: 1-13-87
FISH: 6 WHITE CRAPPIE (fillet)
TEQ: 0.04 ppt 2378 TCDD: 0 ppt

SITE: ARKANSAS RIVER AT WEBER FALLS, OK
LATITUDE: 35 41 LONGITUDE: 95 14
EPISODE #: 3089 SAMPLED: 1-13-87
FISH: 5 CARP (whole fish)
TEQ: 0.19 ppt 2378 TCDD: 0 ppt

SITE: FORT GIBSON RESERVOIR, OK
LATITUDE: 36 04 LONGITUDE: 95 16
EPISODE #: 3090 SAMPLED: 12-01-86
FISH: 5 CHANNEL CATFISH (whole fish)
TEQ: 0.34 ppt 2378 TCDD: 0 ppt

SITE: FORT GIBSON RESERVOIR, OK
LATITUDE: 36 04 LONGITUDE: 95 16
EPISODE #: 3090 SAMPLED: 12-01-86
FISH: 5 WHITE CRAPPIE (fillet)
TEQ: 0.07 ppt 2378 TCDD: 0 ppt

SITE: RED RIVER BELOW VALLIANT, OK
LATITUDE: 33 56 LONGITUDE: 95 07
EPISODE #: 3091 SAMPLED: 1-28-87
FISH: 5 RIVER CARPSUCKER (whole fish)
TEQ: 0 ppt 2378 TCDD: 0 ppt

SITE: RED RIVER BELOW VALLIANT, OK
LATITUDE: 33 56 LONGITUDE: 95 07
EPISODE #: 3091 SAMPLED: 1-28-87
FISH: 7 WHITE CRAPPIE (fillet)
TEQ: 0 ppt 2378 TCDD: 0 ppt

SITE: FORT COBB RESERVOIR, OK
LATITUDE: 35 13 42 LONGITUDE: 98 31 35
EPISODE #: 3105 SAMPLED: 2-10-87
FISH: 5 LARGEMOUTH BASS (fillet)
TEQ: 0 ppt 2378 TCDD: 0 ppt

SITE: FORT COBB RESERVOIR, OK
LATITUDE: 35 13 42 LONGITUDE: 98 31 35
EPISODE #: 3105 SAMPLED: 2-10-87
FISH: 5 CARP (whole fish)
TEQ: 1.04 ppt 2378 TCDD: 0.73 ppt

TEQ = TCDD equivalent concentration, a measure of toxicity due to all chlorinated dibenzodioxin and dibenzofuran isomers in terms of the most toxic isomer, 2378 TCDD, in parts per trillion (ppt).

BIOACCUMULATION STUDY RESULTS FOR TEXAS
AUGUST 19, 1988

SITE: LAVACA RIVER NEAR EDNA, TX
LATITUDE: 28 57 35 LONGITUDE: 97 27 15
EPISODE #: 2280 SAMPLED: 5-7-85
FISH: CARP (whole fish)
TEQ: 0 ppt 2378 TCDD: 0 ppt

SITE: LAVACA RIVER NEAR EDNA, TX
LATITUDE: 28 57 35 LONGITUDE: 97 27 15
EPISODE #: 2280 SAMPLED: 5-7-85
FISH: CHANNEL CATFISH (fillet)
TEQ: 0.02 ppt 2378 TCDD: 0 ppt

SITE: SOUTH FORK ROCKY CREEK, TX
LATITUDE: 30 54 41 LONGITUDE: 98 02 12
EPISODE #: 2283 SAMPLED: 11-20-84
FISH: GREY REDHORSE (whole fish)
TEQ: 0 ppt 2378 TCDD: 0 ppt

SITE: SOUTH FORK ROCKY CREEK, TX
LATITUDE: 30 54 41 LONGITUDE: 98 02 12
EPISODE #: 2283 SAMPLED: 11-20-84
FISH: SUNFISH (whole fish)
TEQ: 0 ppt 2378 TCDD: 0 ppt

SITE: HOUSTON SHIP CHANNEL AT MORGAN'S POINT
LATITUDE: 29 40 58 LONGITUDE: 95 58 55
EPISODE #: 3068 SAMPLED: 6-03-87
FISH: 9 CROAKER (fillet)
TEQ: 0.16 ppt 2378 TCDD: 0 ppt

SITE: HOUSTON SHIP CHANNEL AT MORGAN'S POINT
LATITUDE: 29 40 58 LONGITUDE: 95 58 55
EPISODE #: 3068 SAMPLED: 3-20-87
FISH: OYSTERS
TEQ: 8.12 ppt 2378 TCDD: 6.7 ppt

SITE: CORPUS CHRISTI INNER HARBOR, TX
LATITUDE: 27 50 30 LONGITUDE: 97 30 20
EPISODE #: 3069 SAMPLED: 2-25-87
FISH: 5 SEA CATFISH (whole fish)
TEQ: 1.27 ppt 2378 TCDD: 0.72 ppt

SITE: NECHES RIVER (TIDAL), TX
LATITUDE: 29 59 30 LONGITUDE: 93 54 00
EPISODE #: 3070 SAMPLED: 3-03-87
FISH: 4 CROAKER (whole fish)
TEQ: 0.11 ppt 2378 TCDD: 0 ppt

TEQ = TCDD equivalent concentration, a measure of toxicity due to all chlorinated dibenzodioxin and dibenzofuran isomers in terms of the most toxic isomer, 2378 TCDD, in parts per trillion (ppt).

SITE: NECHES RIVER (TIDAL), TX
LATITUDE: 29 59 30 LONGITUDE: 93 54 00
EPISODE #: 3070 SAMPLED: 3-03-87
FISH: 4 SHEEPSHEAD (fillet)
TEQ: 0.73 ppt 2378 TCDD: 0.69 ppt

SITE: SAN ANTONIO RIVER AT ELMENDORF, TX
LATITUDE: 29 14 15 LONGITUDE: 98 21 43
EPISODE #: 3071 SAMPLED: 7-21-87
FISH: 3 CARP (whole fish)
TEQ: 1.98 ppt 2378 TCDD: 1.07 ppt

SITE: RIO GRANDE BELOW EL PASO, TX
LATITUDE: 31 05 LONGITUDE: 105 36
EPISODE #: 3072 SAMPLED: 6-03-87
FISH: 9 WHITE BASS (fillet)
TEQ: 0.03 ppt 2378 TCDD: 0 ppt

SITE: RIO GRANDE BELOW EL PASO, TX
LATITUDE: 31 05 LONGITUDE: 105 36
EPISODE #: 3072 SAMPLED: 6-02-87
FISH: 4 CARP (whole fish)
TEQ: 0.05 ppt 2378 TCDD: 0 ppt

SITE: MESQUITE BAY, TX
LATITUDE: 28 09 LONGITUDE: 96 52
EPISODE #: 3075 SAMPLED: 2-18-87
FISH: 4 SEA CATFISH (fillet)
TEQ: 0 ppt 2378 TCDD: 0 ppt

SITE: LAKE SAM RAYBURN, TX
LATITUDE: 31 25 58 LONGITUDE: 94 33 56
EPISODE #: 3081 SAMPLED: 12-10-86
FISH: 4 WHITE BASS (fillet)
TEQ: 1.04 ppt 2378 TCDD: 0.94 ppt

SITE: LAKE SAM RAYBURN, TX
LATITUDE: 31 25 58 LONGITUDE: 94 33 56
EPISODE #: 3081 SAMPLED: 12-10-86
FISH: 4 CHANNEL CATFISH (whole fish)
TEQ: 1.58 ppt 2378 TCDD: 1.58 ppt

SITE: BRAZOS RIVER NEAR FREEPORT, TX
LATITUDE: 28 57 LONGITUDE: 95 22
EPISODE #: 3085 SAMPLED: 5-25-87
FISH: 8 SEA CATFISH (whole fish)
TEQ:12.78 ppt 2378 TCDD: 2.58 ppt

TEQ = TCDD equivalent concentration, a measure of toxicity due to all chlorinated dibenzodioxin and dibenzofuran isomers in terms of the most toxic isomer, 2378 TCDD, in parts per trillion (ppt).

SITE: NECHES RIVER BELOW DIBOLL, TX
LATITUDE: 31 08 00 LONGITUDE: 94 48 39
EPISODE #: 3093 SAMPLED: 6-3-87
FISH: 4 SMALLMOUTH BUFFALO(whole fish)
TEQ: 0.9 ppt 2378 TCDD: 0.41 ppt

SITE: NECHES RIVER BELOW DIBOLL, TX
LATITUDE: 31 08 00 LONGITUDE: 94 48 39
EPISODE #: 3093 SAMPLED: 6-3-87
FISH: 4 LARGEMOUTH BASS (fillet)
TEQ: 0 ppt 2378 TCDD: 0 ppt

TEQ = TCDD equivalent concentration, a measure of toxicity due to all chlorinated dibenzodioxin and dibenzofuran isomers in terms of the most toxic isomer, 2378 TCDD, in parts per trillion (ppt).

RECORD OF COMMUNICATION

☑ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Record of item checked above)

TO: Glenda Maloff

FROM: Mark Gard
Region 9 WQM Coordinator for Arizona

DATE: 10-21-88

TIME:

SUBJECT: 304(l) short list candidates at border of Arizona - N.M.

SUMMARY OF COMMUNICATION

Mark called to check and see if 2 reaches identified on Arizona's short list are identified across the border in New Mexico also. The 2 reaches Arizona has identified are as follows:

1) 15020060007 - Rio Puerco - identified for exceedances on arsenic, copper, manganese, lead, selenium + radium.

2) 15040002-004 - Dila Rives - identified for exceedances on mercury, copper, cadmium + zinc

Arizona has flagged both of these reaches from their 1988 305(6) report which shows both reaches as partially or not achieving uses. The Rio Puerco classification was based on exceedances of standards as indicated by monitored data. He is checking with the state on what type of data they used to assess the Dila Rives.

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES
TO: Jerry Champagne, file, Jim Piatt-NMEID

EPA Form 1320-6 (7-72) REPLACES EPA HQ FORM 3320-3 WHICH MAY BE USED UNTIL SUPPLY IS EXHAUSTED.

SUPERFUND PROJECT UPDATE

UNITED NUCLEAR CORPORATION SITE

McKINLEY COUNTY, NEW MEXICO

Selection of Remedy — *October 1988*

EPA SIGNS THE RECORD OF DECISION

On September 30, 1988, the U.S. Environmental Protection Agency (EPA) signed the Record of Decision on the United Nuclear Corporation (UNC) site in McKinley County, New Mexico. The Record of Decision identifies the selected remedy of contaminated groundwater at the site, and summarizes the major issues raised by the public and how they are addressed. This fact sheet reviews the details of the Record of Decision on the groundwater contamination remedy. Copies of the Record of Decision are available at the information repositories listed on page 3.

In a separate action, UNC has proposed and submitted a Reclamation Plan to the U.S. Nuclear Regulatory Commission (NRC) as required by their Source Material License. The Reclamation Plan includes installation of a cap over the site, mill decommissioning, control of surface water runoff, and removal and evaporation of contaminated groundwater. The Reclamation Plan has been reviewed by EPA and NRC along with several other recent reports submitted by UNC concerning onsite reclamation.

THE SELECTED REMEDY

The Feasibility Study was completed in August 1988 and described a range of alternatives to remediate contaminated groundwater at the UNC site. The selected remedy to extract and evaporate the contaminated groundwater at the UNC site was listed as Alternative 3 - Groundwater Pumping and Treatment in Zone 3 of the Upper Gallup Aquifer and the Southwest Alluvial Aquifer, with limited action in Zone 1 of the Upper Gallup Aquifer (see Figure 1). The selected remedy provides the best balance among the criteria that EPA uses to evaluate remedial alternatives. It will reduce contaminants in the most permeable aquifers at the site and will prevent migration of hazardous constituents.

The remedy will contain migration of contaminants in the Upper Gallup Aquifer and the Southwest Alluvial Aquifer using existing and additional pumping wells. These pumping wells will alter groundwater flow so that contaminated groundwater is contained in the zone influenced by the pumping wells, and will be pumped to the surface tailings area to be treated using an enhanced mister/pond evaporation system, sized and operated to evaporate inflow from pumping systems (see Figure 1). Residues resulting from evaporative treatment will remain in the tailings disposal area. Eventually, the entire tailings pile will be capped in accordance with reclamation activities directed by the NRC. Monitoring well systems will be maintained in all aquifers to monitor the effectiveness of the pumping wells.

The selected remedy also reduces risks by restricting land use, since control of the byproduct materials disposal area will be transferred to the Department of Energy for long-term care.

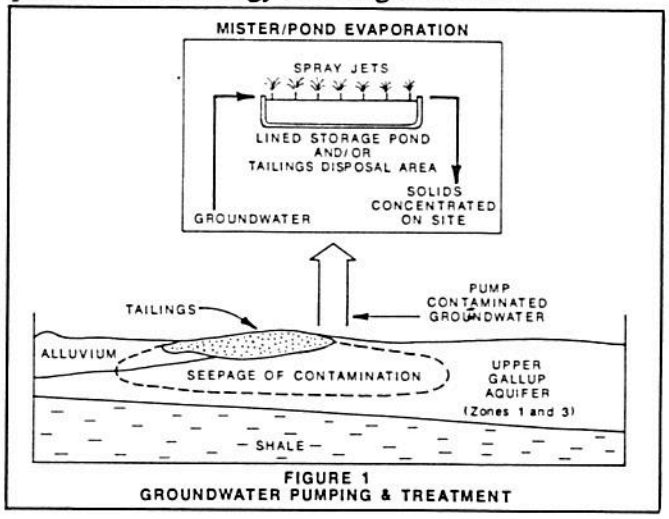


FIGURE 1
GROUNDWATER PUMPING & TREATMENT

It is estimated that this remedy may take 10 or more years to complete. The final cost will depend on the duration of pumping and size of the enhanced mister/pond evaporation system, and is estimated to be between $8 and $17 million.

SITE HISTORY

The UNC site is located in McKinley County, New Mexico, approximately 17 miles northeast of Gallup (see Figure 2). The site consists of a uranium mill complex and tailings disposal area, both located approximately one mile south of the Navajo Indian Reservation. The mill and associated tailings disposal area are situated in the Pipeline Canyon Arroyo and cover about 125 acres. The area around the site is sparsely populated; the nearest residence is located approximately one mile northwest of the site.

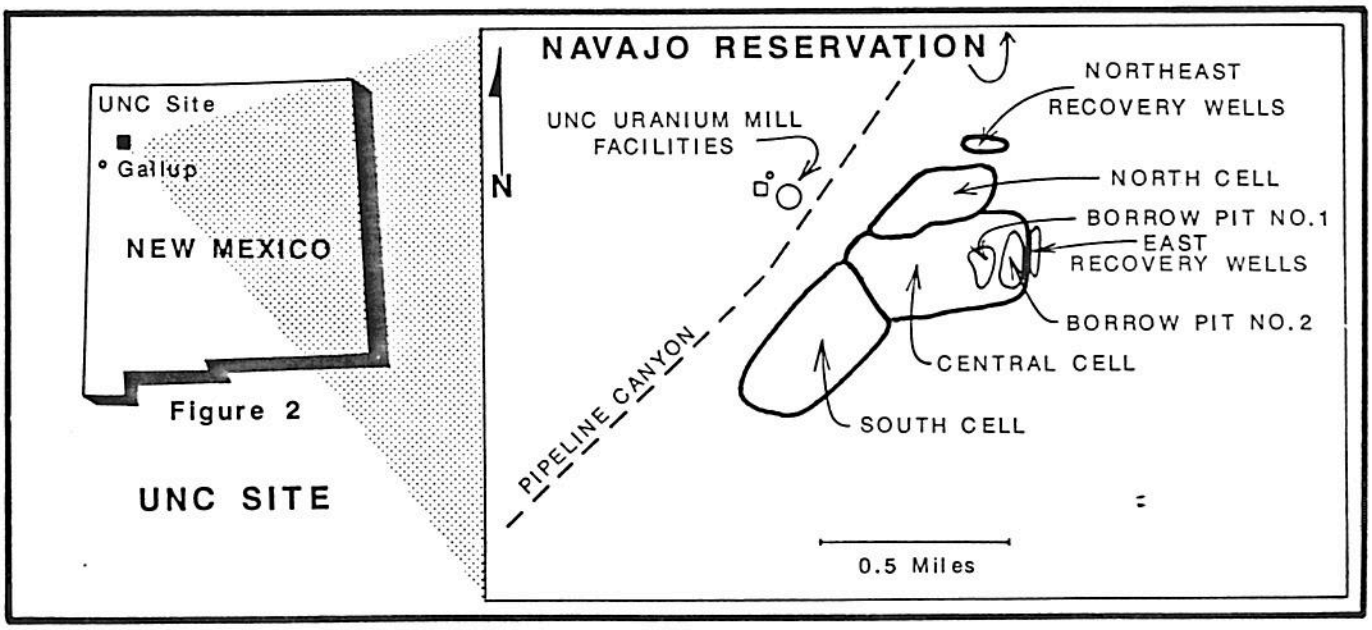
The UNC uranium mill was granted a radioactive materials license by the State of New Mexico in 1977 and operated from mid-1977 to mid-1982. The mill, designed to process 4,000 tons of uranium ore per day, used an acid leach, solvent extraction method to extract uranium from the ore. The acid leach process produced a wet, acidic waste, commonly known as tailings, which were pumped to a disposal area. An estimated 3.5 million tons of tailings were disposed of in ponds until discharge ceased in May 1982.

Tailings disposal resulted in seepage of tailings liquids from unlined ponds at the site into three underlying aquifers: the alluvial aquifer, the Upper Gallup Zone 3 aquifer, and the Upper Gallup Zone 1 aquifer. Prior to licensing of the UNC mill, uranium mining began in the area north of the present site. In 1968, the northeast Churchrock mine began operating and discharged mine dewatering water to the Pipeline Canyon Arroyo. Water discharged from this mine percolated into the ground and added water to the Alluvial and Upper Gallup aquifers underlying much of the site.

On July 16, 1979, a dam at one of the tailings ponds at the UNC site broke, releasing over 90 million gallons of wet tailings into Pipeline Canyon Arroyo and the Rio Puerco. The dam was repaired shortly after the release. Response to the spill was conducted according to criteria imposed by state and federal agencies.

In 1982, the mill was placed on the National Priorities List (NPL) of sites qualifying for remedial action under Superfund.

In June 1986, at the request of the State of New Mexico, the NRC assumed uranium mill licensing authority for the UNC site. Discussions between federal and state agencies followed to determine the most timely and effective way to achieve full reclamation of the site. In 1988, a Memorandum of Understanding (MOU) between EPA and NRC was signed establishing the roles and responsibilities of each agency regarding remedial action at the site. Under the terms of the MOU, NRC requires UNC to disassemble the mill, remove contaminated groundwater, and reclaim the tail-



SUPERFUND PROJECT UPDATE

ATCHISON , TOPEKA AND SANTA FE (AT&SF)

CLOVIS, NEW MEXICO

Selection of Remedy — ***October 1988***

EPA SIGNS THE RECORD OF DECISION

The U.S. Environmental Protection Agency (EPA) has signed the Record of Decision on the AT&SF site in Clovis, New Mexico. The Record of Decision identifies the selected remedy for remediation at the site, and summarizes the major issues raised by the public and how they are addressed. This fact sheet reviews the selected remedy and provides background information on the site. Copies of the Record of Decision are available at the information repositories listed on the back.

THE SELECTED REMEDY

The selected remedy for the AT&SF site was listed in the Feasibility Study as:

- ☐ Lake Water Alternative 2 - Evaporation and Disposal of Residue
- ☐ Sediment Alternative 3 - Dredge, Onsite Biodegradation, Cap Treatment Area, and Revegetate
- ☐ Soil Alternative 3 - In-Situ Biodegradation.

No cleanup alternative is proposed for the groundwater.

Evaporation of the lake water and disposal of the residue will eliminate the lake water and any associated risks. In order to accelerate the evaporation process, the lake water will be sprayed on the area of the lake bed which is now dry and the residue from the evaporation will be handled with the existing sediments.

The selected alternative for the sediments calls for digging up the sediments and moving them to a treatment area on the site. There they will be aerated to allow the sulfates and petroleum products to biodegrade. Once this occurs, the treatment area will be capped to prevent migration of any remaining contaminants. This will eliminate much of the contamination and will contain the rest.

In-situ biodegradation of the soils will involve the treatment of soils in place to encourage biodegradation of the contaminants through aeration and the addition of nutrients. The area will be revegetated afterward. This will eliminate the biodegradable contaminants.

The selected remedy provides the best balance among the criteria that EPA uses to evaluate remedial alternatives. It is estimated that the cost of this remedy will be $2.8 million and that once the Remedial Design is approved, it will take approximately five years to implement.

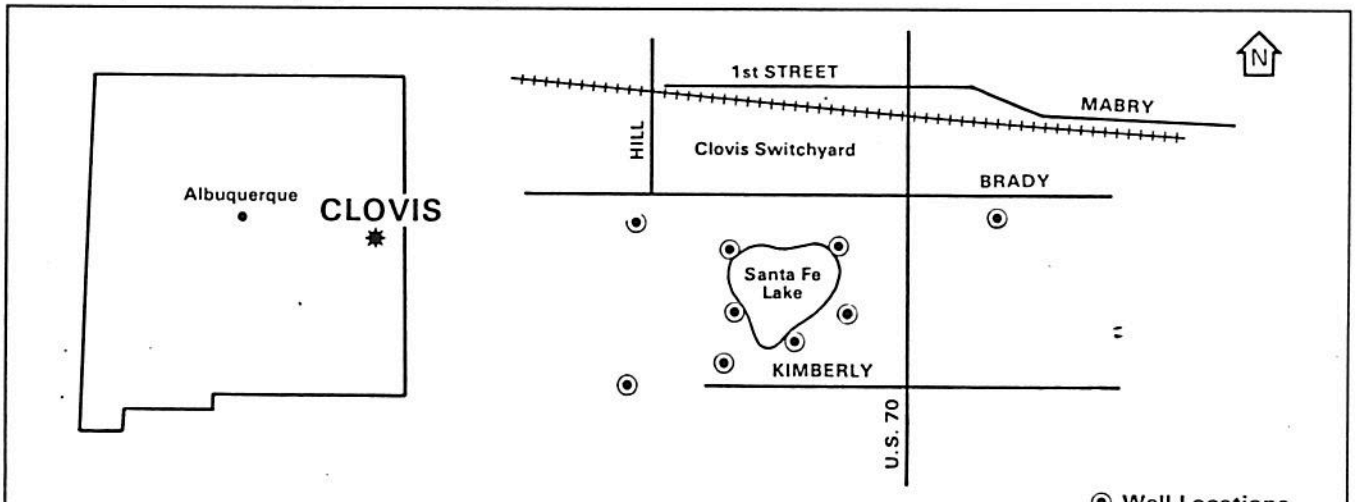


FIGURE 1
AT & SF SITE MAP AND WELL LOCATIONS

SITE BACKGROUND

The Atchison, Topeka and Santa Fe (AT&SF) Superfund site is located south of the AT&SF Railway switching yard in Clovis, New Mexico. As Figure 1 shows, Santa Fe Lake, the focus of the site, is located between Brady and Kimberly roads.

Santa Fe Lake is a playa lake used for the disposal of wastewater from various operations at the switching yard. The lake was used for this purpose since the switching yard was constructed in the early 1900s, although the types of material discharged into the lake have changed through the years. In 1962, a hopper car washing facility was built at the switching yard to clean railway hopper cars. The hopper cars were used for the hauling of bulk materials such as potash, cement, fertilizer, grain, and coke. The cars were cleaned at the switching yard and the wastewater from this operation was discharged into the lake. The hopper car washing operation continued until 1982 when it was closed. Based upon the previously documented contamination in Santa Fe Lake, the site was added to the National Priorities List (NPL) of hazardous waste sites in 1981.

The AT&SF Railway investigated the lake under EPA supervision. The investigation included sampling of the lake water, sampling of the lake sediments, boring beneath the lake bed to sample soil, and the installation and sampling of groundwater monitoring wells. In addition, samples were collected to determine what the natural conditions in the area were. These background samples included the sampling of City of Clovis water wells, sampling of other area playa lakes, and boring outside the lake area to get clean soils samples.

The Remedial Investigation sampling defined the levels and extent of contamination at the site. Compared to water in other playa lakes in the area, the Santa Fe Lake water contains elevated amounts of arsenic, boron, chloride, fluoride, total phenolics, sulfate, total dissolved solids (TDS), and total organic carbon (TOC). The lake sediments show levels of boron, lead, chromium, hydrocarbons, total phenolics, and TOC above expected levels. Compared to uncontaminated soil samples, the soils from under the lake bed show elevated levels of hydrocarbon and total phenolics. Sulfate, chloride, boron, and barium are also of concern. Two groundwater monitoring wells near the Santa Fe Lake, as compared to the uncontaminated City of Clovis water wells, contain elevated amounts of chloride.

The Feasibility Study was completed in July 1988. It describes different options for lake water, sediment, and soil remediation. All of the alternatives passed an initial screening as being technically feasible and otherwise appropriate for use at the AT&SF site. A public comment period and public meeting on the alternatives were held in August and September 1988. However, no comments were received.

The Record of Decision chose the remedial alternatives described in this fact sheet as the selected remedy. This decision document reviews the information resulting from the Remedial Investigation and Feasibility Study and described the relatives strengths and weaknesses of each alternative considered.

FOR MORE INFORMATION

Although this fact sheet summarizes the Record of Decision, interested persons are encouraged to visit the local information repositories and read the document in its entirety. The Administrative Record file which contains all the information EPA used to select the remedy for the site is located at the Clovis-Carver Public Library.

Curry County Courthouse
7th and Main Street
Clovis, New Mexico

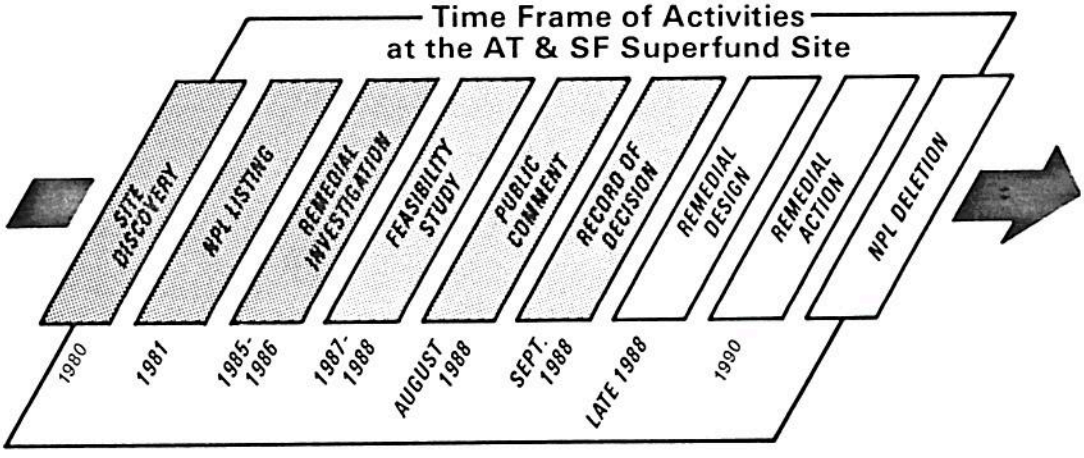
Clovis City Hall
321 Connelly
Clovis, New Mexico

Clovis-Carver
Public Library
4th and Mitchell
Clovis, New Mexico

Environmental
Improvement Div.
212 East Grand
Clovis, New Mexico

If you have further questions, please call or write to:

Ellen D. Greeney, Community Relations Coordinator
U.S. EPA (6H-SS), 1445 Ross Avenue, Dallas, Texas 75202
214/655-6720



ings disposal area. EPA requires UNC to contain and treat contaminated groundwater outside the disposal area.

In 1985, EPA initiated a Remedial Investigation (RI) to characterize groundwater contamination near the UNC site. Twenty-nine wells were installed near the tailings disposal area and were sampled together with five UNC wells. Substances detected in the groundwater include heavy metals, radionuclides, and other chemical constituents. Aquifer testing was also conducted as part of the RI to determine groundwater flow characteristics at the site. Existing studies and investigations of subsurface conditions conducted by UNC and the New Mexico Environmental Improvement Division, were used in conjunction with EPAs RI to help understand site conditions.

The Feasibility Study was completed in August 1988 and describes a range of alternatives to contain and treat contaminated groundwater at the UNC site. EPA evaluated the alternatives on the basis of technical feasibility, effects on human health and the environment, and cost.

The public was invited to attend an informational open house on August 4 and a public meeting on August 31, 1988. The RI and FS reports were available for comment during from August 19, 1988 through September 16, 1988.

FOR MORE INFORMATION

Although this fact sheet summarizes the Record of Decision, interested persons are encouraged to visit the local information repositories and read the document in its entirety.

Gallup Public Library
115 West Hill Avenue
Gallup, New Mexico

Navajo Nation
Division of Resources
Window Rock, Arizona

The Administrative Record has been established at the Gallup Public Library. This record contains all of the information which formed the basis for EPA's selected remedy. If you have questions about the content of this record, please contact EPA.

If you have questions or would like more information about the UNC site, please call or write to:

Ms. Ellen Greeney
Superfund Branch (6H-SS)
U.S. EPA
1445 Ross Avenue
Dallas, Texas 75202
214/655-6720

MAILING LIST

If you wish to be placed on the UNC site mailing list, please complete this form, detach, and mail to: Ms. Ellen Greeney, Community Relations Coordinator, U.S. EPA (6H-SS), 1445 Ross Avenue, Dallas, Texas 75202.

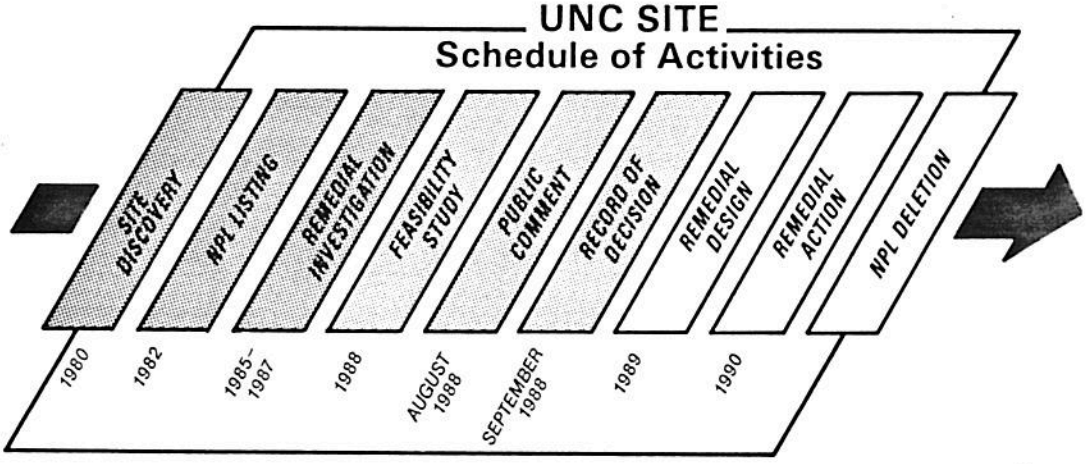
Name _____

Affiliation (if any) _____

Address _____

City _____ State _____ Zip Code _____

Daytime Phone (please include area code) _____



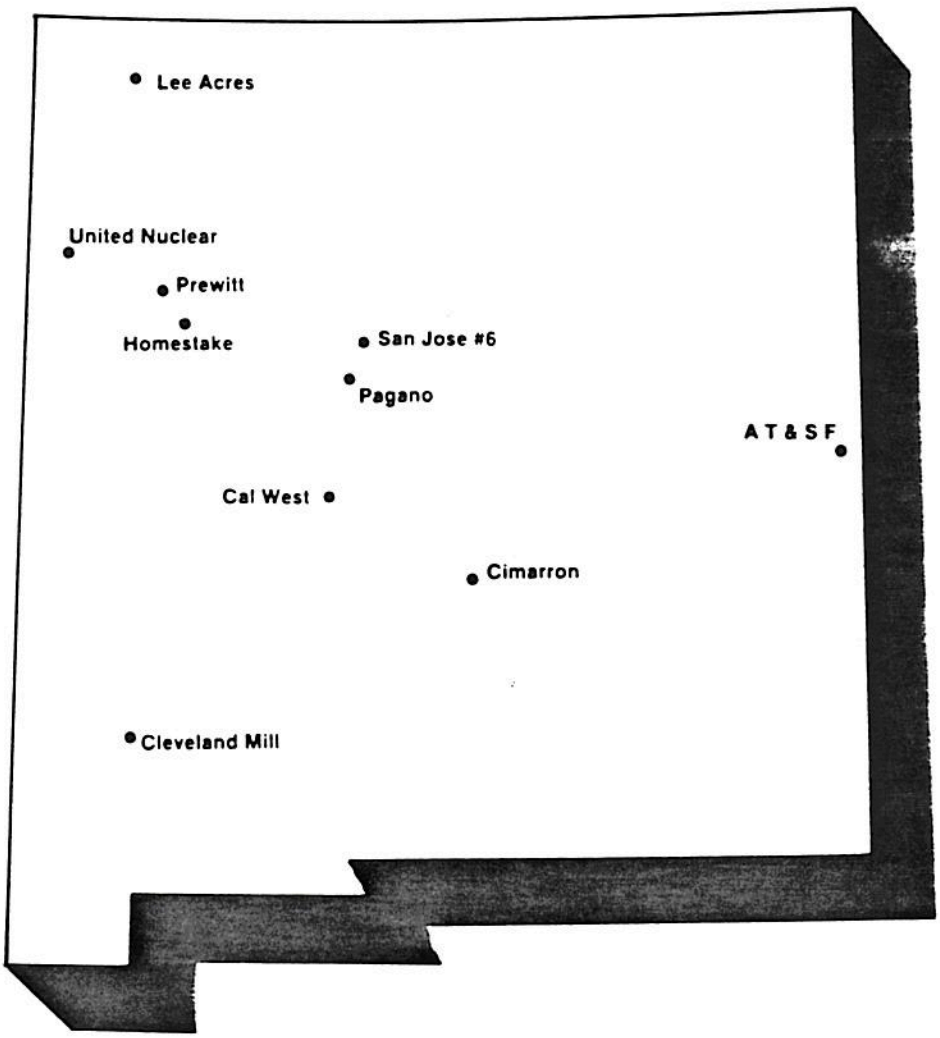
U.S. EPA

Region VI
Superfund Branch (6H-SS)
1445 Ross Avenue
Dallas, Texas 75202

United States
Environmental Protection Agency
Region VI

Volume 1, Number 4 October 1988

Quarterly Status Report of Superfund Sites



The State of New Mexico currently has ten sites listed on EPA's National Priorities List of hazardous waste sites. This report includes a brief description and the current status on each of these sites. EPA publishes this report on a quarterly basis to keep you informed of the activities and decisions affecting the Superfund sites in New Mexico. However, it will not replace the site-specific fact sheets that are published throughout the life of a site.

If you did not receive this status report by mail or know of someone who should be added to our mailing list, please complete and return the coupon printed on page 7. Corrections to the current mailing list would also be appreciated.

The site was proposed for addition to the National Priorities List on June 24, 1988, and public comment was accepted. Local officials were briefed on the site and the Superfund process on September 29, 1988.

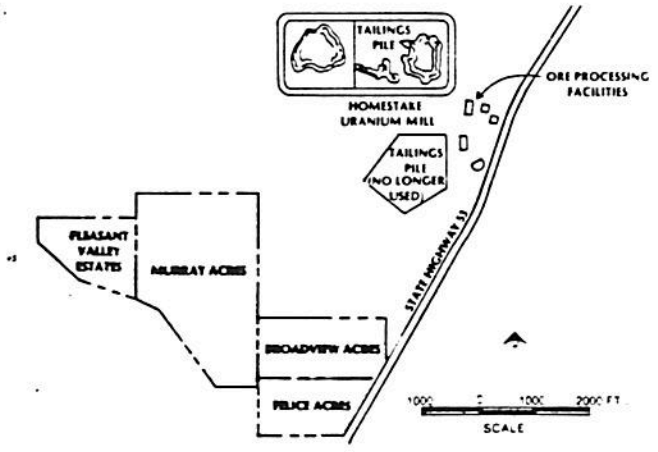
CIMARRON MINING & MILLING in Carrizozo, Lincoln County: During 1979-82, the site was used as a metal recovery mill using a 50/50 solution of cyanide salt and metal stripper. Prior to 1979, gold was extracted using cyanide. In 1984, an inspection revealed two cyanide solution tanks, a discharge pit, a tailings impoundment, an uncovered tailings pile and a drum storage area. Access to the area is restricted by fencing; however, the levels of cyanide on site are potentially toxic to human health.

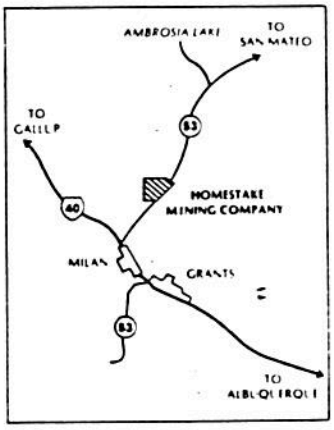
The site was proposed for addition to the National Priorities List on June 24, 1988, and public comment was requested. Local officials were briefed on the site and the Superfund process on September 29, 1988.

CLEVELAND MILL near Silver City, Grant County: The site is an abandoned lead, zinc, and copper mill covering 5 to 10 acres about 5 miles northeast of Silver City. An estimated 12,000 cubic yards of tailings heavily contaminated with lead, silver, zinc, copper, and arsenic are piled on site. Tests indicate that water in the Little Walnut Creek at least 5 miles downstream is highly acidic and contains these same contaminants.

This mining site was proposed for the National Priorities List in mid-1988, and public comment was accepted. Local officials were briefed on the site and the Superfund process on September 28, 1988.

HOMESTAKE MINING COMPANY (HMC) near Milan, Cibola County: This site is an active uranium mill where seepage from two mill-tailings ponds have contaminated a shallow aquifer under the site. Approximately 22 million tons of tailings cover an estimated 245 acres, piled up to 100 feet high.



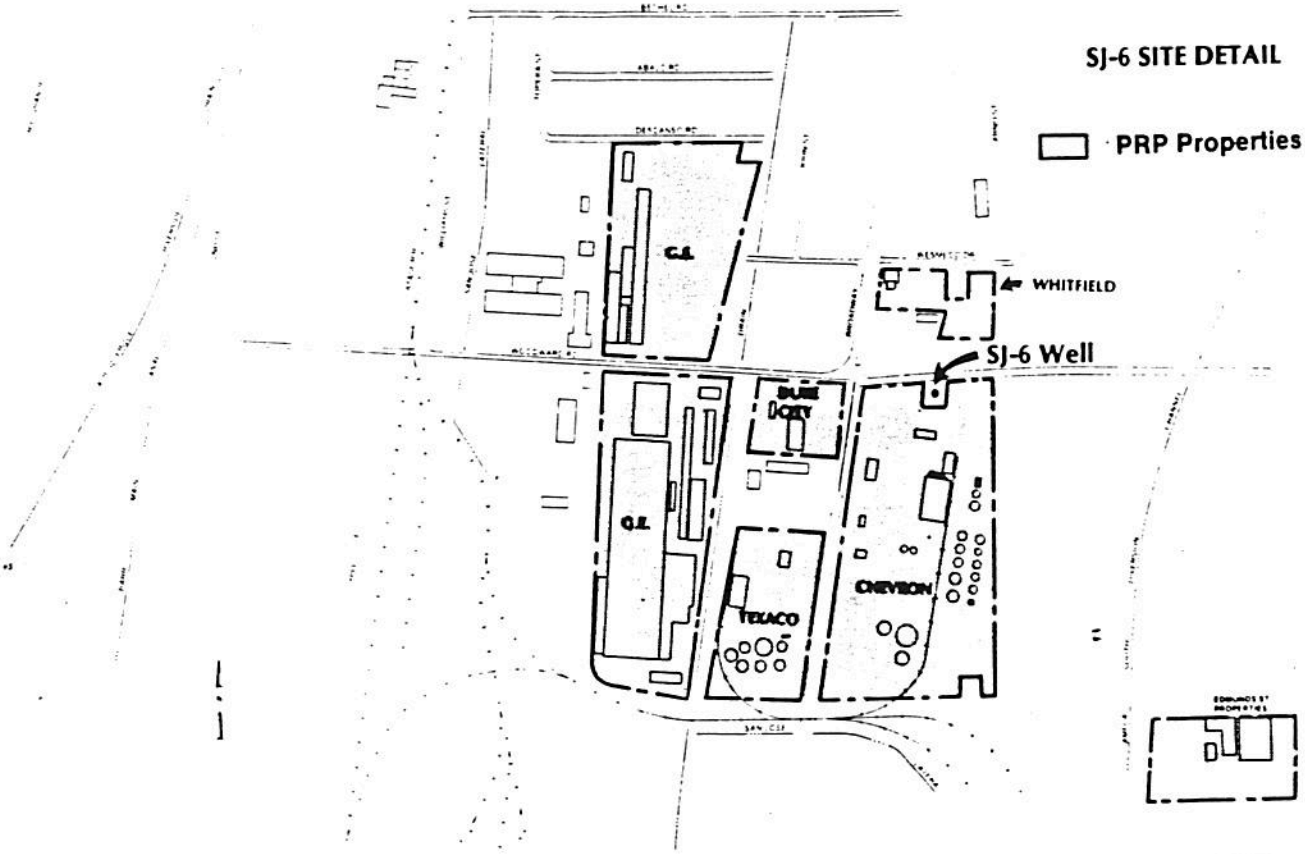


the ruins of the refinery, including waste pits, oil/water separator, tank bases and other rubble from equipment. Tract B includes two major spill areas and the remains of a pump lift station. Site operations began in the early 1940s and continued for 25 years under several owners and operators. The Navajo Nation has owned the property since 1966. Tests conducted in 1986 detected benzene and xylenes in an on-site well at a depth of 17 feet.

The site was proposed for the National Priorities List on June 24, 1988, and public comment was requested. Local officials were briefed on the site and the Superfund process on September 27, 1988.

SAN JOSE WELL #6 (South Valley) in Albuquerque, Bernalillo County: San Jose Well #6 (SJ-6) is located on Woodward Road east of Broadway in the South Valley area. Contaminants from a number of industrial sources have contributed to localized groundwater contamination in the vicinity of the SJ-6 municipal drinking water well.

The one-square mile area around SJ-6 was designated as the State's top priority for Superfund activity in New Mexico and was proposed for inclusion on the National Priorities List in December 1982. Two area municipal wells have been closed, including SJ-6. Closing the SJ-6 well caused a decrease in Albuquerque's available water supply for fire protection and other purposes. As a result, EPA installed a new well (Burton #4) at another location, Construction of the new water supply well was completed in 1988.



LOCAL REPOSITORIES

ATSF
Clovis-Carver Library
4th & Mitchell Streets
Clovis, New Mexico

Homestake
NMSU Campus Library
1500 Third Street
Grants, New Mexico

San Jose Well
Albuquerque Library
501 Copper, NW
Albuquerque, New Mexico

UNC
Gallup Public Library
115 West Hill Avenue
Gallup, New Mexico

All New Mexico
New Mexico EID
1190 St Francis Drive
Santa Fe, New Mexico

All Region 6
U. S. EPA, 12th Floor
1445 Ross Avenue
Dallas, Texas

Repositories for the six new sites have not been established yet. You will be notified once the locations have been selected.

ADDITIONAL INFORMATION

If you need additional information on the Superfund sites in New Mexico, please call or write to:

Ellen Greeney
Superfund Community Relations
U.S. EPA (6H-SS)
1445 Ross Avenue
Dallas, Texas 75202
214-655-6720

New Mexico

ADDITIONS TO MAILING LIST

If you did not receive this status report by mail and would like to be added to the mailing list, please complete and send to:

Ellen D. Greeney
Superfund Program Branch
U. S. EPA (6H-SS)
1445 Ross Avenue
Dallas, Texas 75202

Name _____

Street Address _____

City, State _____ Zip _____

Affiliation _____

Phone ( ) _____

W - Superfund Innovative Technology Evaluation Program - a two-page description of EPA's search to find new ways of handling waste.

T - Strategy and Program Plan - a 50-page booklet describing the specific steps and strategy involved in demonstrating an innovative technology to EPA.

Z - Conference Report - a 12-page report on the November 1987 conference on the innovative technologies being demonstrated throughout the nation.

G - Incineration - a four-page description of how the incineration process works.

7 - Hazardous Waste Incineration: Questions and Answers - a 51-page book on incinerators. This book was designed for commercial incinerators and although incinerators at Superfund sites do not go through the permitting process, all standards are met.

H - Dioxin Facts - two pages of answers to the commonly asked questions about dioxin.

K - Getting into the Act - a 15-page booklet on contracting and sub-contracting opportunities in the Superfund program

GENERAL INTEREST BROCHURES

O - Your Guide to the United States Environmental Protection Agency - a 26-page booklet outlining the various programs administered by EPA.

N - Protecting Our Ground Water - a fold-out colored brochure and poster regarding the ground water program and how contaminants can destroy this precious resource.

Mail to Ellen Greeney, EPA, (6H-SS), 1445 Ross Ave, Dallas, TX 75202

Name _____

Street Address _____

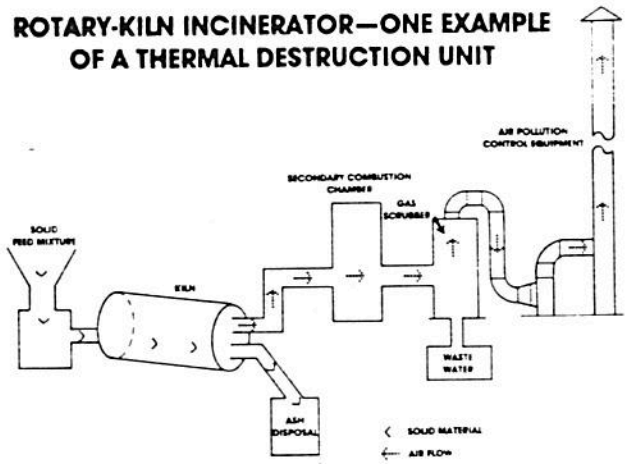
City, State _____ Zip _____

Circle the code for the item(s) that you want: A B C D

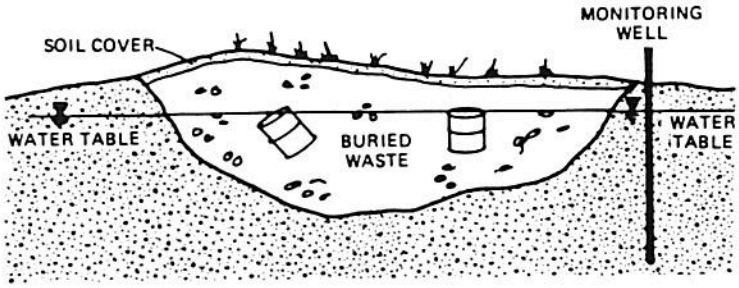
G H I J K L N O P Q R S T U V W Z 7 8 10

Incineration: Burning of certain types of solid, liquid, or gaseous materials under controlled conditions to destroy hazardous waste.

ROTARY-KILN INCINERATOR—ONE EXAMPLE OF A THERMAL DESTRUCTION UNIT



Monitoring Wells: Special wells that are drilled at specific locations where ground water can be sampled periodically to determine such things as flow direction and types/amounts of contamination.



GROUNDWATER MONITORING

National Priorities List: EPA's list of the most serious uncontrolled or abandoned hazardous waste sites requiring possible long-term cleanup.

Parts per million: A unit commonly used to express low concentrations of contaminants. For example, one ounce in one million ounces.

Pentachlorophenol: An organic compound used as a wood preservative.

Potentially Responsible Party: A company or individual that is believed to be responsible for the contamination at a Superfund site.

Record of Decision: A public document that explains which cleanup alternative will be used at a Superfund site.

Remedial Action: The actual construction or implementation phase that is necessary to clean up the site.

Remedial Design: The engineering design or blueprint of the remedy selected for cleaning up a site.

Remedial Investigation: An extensive investigation conducted at a Superfund site to determine the nature and extent of contamination.

Repository: The location such as a public library or city hall that houses a file of current information, technical reports, and other documents related to a specific Superfund site.

Responsiveness Summary: A summary of oral and/or written public comments received by EPA during a comment period.

Slurry Wall: A barrier wall constructed of a soil bentonite mix or other material to prevent liquids from seeping through; installed underground to the depth of the bedrock to cut off contaminated ground water.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MAR 10 1989

MEMORANDUM

SUBJECT: Section 304(l) Meeting - New Mexico

FROM: Larry Champagne
Regional 304(l) Coordinator (6W-QS)

THRU: Robert B. Elliott
Chief
Water Quality Management Branch (6W-Q)

TO: See Below

The next meeting of the §304(l) Technical Review Committee (TRC) is scheduled to be held on Monday, March 20, 1989, at 1:00 in Room 11D. The purpose of the meeting will be to discuss New Mexico's final submittal under §304(l). Even though the Region has until June 4th to decide on the approvability of this submittal, it is desirable to conduct this review at this time so that any changes, if necessary, could be negotiated with the State.

Attached for your review are the following items:

1. TRC comment letter sent to NMEID on December 23, 1988
2. NMEID's response letter
3. NMEID's final submittal of §304(l) lists

Please review these items and be prepared to discuss them at the meeting. Your participation is greatly appreciated and will play a vital role in the Region's ultimate decisions on this critical issue.

Addressees: Bowen (6W-QS)
Vickery (6W-QT)
Ferguson (6W-P)
Huffman (6W-PI)
Stenger (6W-PM)
Pendergast (6W-PT)
Potts (6W-EO)
Holman (6E-SA)
Gilrein (6H-SA)
Workman (6H-HS)

LC 3/10

6W-QS:LC:tlc:3/10/89

LC-8849

CONCURRENCES

SYMBOL	6W-QS							
SURNAME	Bowen RBE							
DATE	3/10							

EPA Form 1320-1 (12-70)

OFFICIAL FILE COPY

★U.S.GPO:1988-0-206-471

§304(l) Technical Review Committee Meeting - New Mexico

March 20, 1989

NAME	REPRESENTING
Larry Champagne	6W-QS
Dierdre Malott	6W-QS
Paul C. Koska	6E-SA
Michael D. Morton	6W-PT
Jim B Watson	6W-PM
[illegible]	6W-QT

AGENDA

Section 304(l) Technical Review Committee Meeting

March 20, 1989

I. Brief Overview of Section 304(l)

   A. Statutory Requirements
   B. Proposed Regulation

II. NMEID Submittal and Technical Agreement

III. ESD Efforts

   A. STORET Retreival
   B. Mapping Procedures

IV. Contractor Assistance

V. Overall Evaluation of NMEID Effort

VI. Concluding Remarks

4/6/89

Subject: New Mexico 304(l) Submittal

From: P. Crocker

to: S. Swenson

My comments on the States 304(l) list supplement your comments dated 3/20/89. I am in agreement with your comments.

1. In the case of Kiss-Me-Ni:-Ol: Valley, an ephemeral reach of the Chaco River, the state states that the water body was refined to the mini list. However after reviewing the mini list, this water body was not found.

2. I feel strongly that the San Juan River at Blaomfield should be retained on the short list as, according to designated fishable use of the stream, fish consumption needs consideration. This status should apply until discharge data are generated to show if arsenic is being contributed by the refinery.

3. From a study which we participated with the state on, it was evident that Big Arsenic Springs, which is a groundwater seep which surfaces, flows for a short distance, and then flows into the Rio Grande, is toxic. The reason for this toxicity was not determined, and there are no point source discharges present. Reference the attached 10/30/84 memo to the EID. I have also attached an administrative Record checklist to be used in addressing the concern to the state that this water body should be placed

on the long list.

Attachments

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

MEMORANDUM

SUBJECT: Section 304(l) Meeting - New Mexico

FROM: Robert B. Elliott
Chief
Water Quality Management Branch (6W-Q)

TO: Addresses

The next meeting of the §304(l) technical review committee is scheduled to be held on Friday October 21, 1988, at 1:00 in the Louisiana Room. The purpose of the meeting will be to discuss the information which New Mexico has submitted under §304(l) and the work the Headquarter's contractor has conducted. These materials are attached for your review.

Please have the person on your staff who is most familiar with water quality problems (particularly toxics problems) in New Mexico attend the meeting. Please call Larry Champagne at 5-7140 if you have any questions.

Thank you for your cooperation.

Attachments

Addressees:
Bowen (6W-QS)
Neleigh (6W-QT)
Ferguson (6W-P)
Huffman (6W-PI)
Stenger (6W-PM)
Pendergast (6W-PT)
Holman (6E-SA)
Potts (6W-EO)
Acting (6H-E)
Edlund (6H-S)
Brown (6H-H)
Becker (6H-C)
Murphy (6T-P)
Chambers (6H-SS)
Parr (6H-HS)

cc: Allyn M. Davis (6H)
William B. Hathaway (6T)

CONCURRENCES							
SYMBOL	LC 10/7						
SURNAME	6W-QS:LC:tlc:10/7/88			LC-8491			
DATE	6W-QS						

EPA Form 1320-1 (12-70)

RBE 10/7

OFFICIAL FILE COPY

★U.S.GPO:1988-0-206-471

§ 304(l) Technical Review Committee Meeting - NEW MEXICO

October 21, 1988

NAME	MAIL CODE	PHONE #
Larry Champagne	6W-QS	7140
Sheila Malott	6W-QS	7140
Russ Bowen	6W-QS	7140
Paul C. Kosha	6E-SA	2289
Carl Young	6E-SA	2289
SUSAN Swenson	6W-QT	7145
Terry Mendiola	6H-CE	6775
BRENT LARSEN	6W-PM	7175
Curt McCormick	6W-PT	7175
Jane Watson	6W PM	7175

AGENDA

Section 304(l) Technical Review Committee Meeting

October 21, 1988

I. Overview §304(l)

   A. Statutory requirements

   B. Regional/National guidance

   C. Regulation

II. NMEID Submittal and Technical Agreement

III. Contractor Assistance/16 Screening Criteria

IV. ESD Report

V. Additional Data/Information to be Considered

VI. Evaluation of NMEID Effort

VII. Concluding Remarks

   A. Status of §304(l) in other Region 6 States

   B. Next meeting

AGENDA

Section 304(l) Technical Review Committee Meeting

October 21, 1988

I. Overview §304(l)

   A. Statutory requirements LISTS, ICS, WQAP

   B. Regional/National guidance TA

   C. Regulation

II. NMEID Submittal and Technical Agreement

III. Contractor Assistance/16 Screening Criteria

IV. ESD Report & MCLS

V. Additional Data/Information to be Considered Superfund, RCRA

VI. Evaluation of NMEID Effort

VII. Concluding Remarks

   A. Status of §304(l) in other Region 6 States

   B. Next meeting

      LA 11-18

TIM RODRIGUES 5058279500

RCRA Hazardous Waste Code Printout

NMD083309674 NEW MEXICO STATE HIGHWAY DEPT. DIST ONE LAB, US 70-80 EAST DEMING 33030
SAYRE CHARLES D.H.E. 5055462603 2 (facility notified as handling these wastes)
*F001- -

NMD058214081 NEW MEXICO STATE UNIVERSITY 1500 3RD ST. GRANTS 87020
ARAGON J. INSTRUCTOR 5052877983 2
*D000- 0000000000.00000- *D001- 0000000000.00000-

NMD075088252 NEW MEXICO STATE UNIVERSITY WEDDELL DRIVE & S HORSESHOE ST LAS CRUCES 88003
DAA W HAROLD ASSOC ACADEMIC VP 5056462542 1 X S
*D000- 0000000003.19334-S01 *D001- 0000000000.36288-S01 *D002- 0000000000.07710-S01
*D003- 0000000000.00724-S01 *D006- 0000000000.00090-S01 *D007- 0000000000.00044-S01
*D008- 0000000000.00090-S01 *D009- 0000000000.00180-S01 *D012- 0000000000.00090-S01
*D013- 0000000000.00090-S01 *D014- 0000000000.00452-S01 *D015- 0000000000.00906-S01
*D016- 0000000000.00452-S01 *D017- 0000000000.00452-S01 *F001- 0000000000.07256-S01
*F007- 0000000002.90304-S01 *P001- 0000000000.00090-S01 *P030- 0000000000.00272-S01
*P044- 0000000000.00452-S01 *P066- 0000000000.00452-S01 *P069- 0000000000.00090-S01
*P106- 0000000000.00022-S01 *U002- 0000000000.08164-S01 *U003- 0000000000.00090-S01
*U001- 0000000000.00090-S01 *U019- 0000000000.02268-S01 *U031- 0000000000.01088-S01
*U036- 0000000000.00452-S01 *U044- 0000000000.02902-S01 *U052- 0000000000.00044-S01
*U072- 0000000000.00180-S01 *U077- 0000000000.00544-S01 *U108- 0000000000.00452-S01

FORM NO 413 3

WASTE CODE REPORT PAGE 5

EPA-ID.NO. FACILITY NAME FACILITY ADDRESS FACILITY CITY ZIP
NAME OF CONTACT FACILITY PHONE GEN TRA TSD TSD FLAG
*WASTE CODE - QUANTITY OF WASTE IN METRIC TONS/YR - CODE FOR PROCES USED TO HANDLE WASTE

*U112- 0000000000.04354-S01 *U122- 0000000000.01088-S01 *U133- 0000000000.00090-S01
*U138- 0000000000.00022-S01 *U151- 0000000000.00090-S01 *U154- 0000000000.03174-S01
*U159- 0000000000.00544-S01 *U162- 0000000000.00090-S01 *U211- 0000000000.03264-S01
*U220- 0000000000.07256-S01 *U239- 0000000000.00362-S01

NMD103497871 NEW MEXICO UNIVERSITY OF NM HOSPITAL 2211 LOMAS BLVD NE ALBUQUERQUE 87106
VILLAFUERTE, RICHARD 5058432160 2
*D000- - *D001- - *D002- -
*D003- - *P030- - *P057- -
*P105- - *U002- - *U003- -
*U010- - *U012- - *U035- -
*U044- - *U058- - *U059- -
*U077- - *U112- - *U115- -
*U122- - *U133- - *U150- -
*U151- - *U154- - *U188- -

RCRA Hazardous Waste Code Print Out

NM2140909100 US DEPT INT BIA BRCH OF ROADS CONSTRUCTI 9MI SO. OF FARMINGTON HWY 371 FARMINGTON 87499
(Facility notified as handling these wastes)
TRACEY LESLIE SHP FM 5053277371 2
*D000- 0000000000.00000- *D001- 0000000000.00000- *F002- 0000000000.00000-
*F004- 0000000000.00000-

NM1142314920 US DEPT INT CHAMAFIELD DIV PINON DRIVE GOV CAMP EDITION CHAMA 87520
SCHEMBERA ROBERT E PROJEC 5057663381
* - -

NM3142319877 US DEPT INT PECOS RIVER PROJECT EAST ORCHARD LANE (INDUS BLDG CARLSBAD 88220
JAMES AMOS CHIEF O&M 5058871188
* - -

NM5890015535 US DOE ALBUQUERQUE OPERATIONS OFFICE PENNSYLVANIA & H STS KAFB-E ALBUQUERQUE 87115
GELSTON DENISE C 5058461108
*D000- - *D001- - *D002- -
*D003- - *F001- - *F002- -
*F009- - *F011- - *F017- -
*U002- - *U003- - *U019- -
*U031- - *U032- - *U043- -
*U044- - *U051- - *U071- -
*U108- - *U117- - *U122- -
*U134- - *U154- - *U159- -
*U169- - *U186- - *U209- -
*U211- - *U220- - *U228- -

NM4890110519 US DOE INTEGRATED CIRCUIT BLDG 870-TECH AREA 1-SNL-KAFB ALBUQUERQUE 87115
SODEN C. / BRANCH CHIEF 5058461106 1
*D001- 0000000000.00000- *D002- 0000000000.00000- *F003- 0000000000.00000-
*U002- 0000000000.00000- *U134- 0000000000.00000- *U154- 0000000000.00000-
*U239- 0000000000.00000-

NM0890010515 US DOE LOS ALAMOS SCIENTIFIC LABORATORY LOS ALAMOS AREA OFFICE LOS ALAMOS 87544
VALENCIA H ARE MG 5056675105 1 X X D
*D000- 0000000003.89560-D80,D83 *D001- 0000000023.26968-D80,S01,T03 *D002- 0000000036.28800-D80,D83
*D003- 0000000011.79360-D80,D83,T04 *D006- 0000000000.00045-D80 *D007- 0000000000.00725-D83
*D009- 0000000000.68176-D80,S01,S02,T01 *D004- 0000000000.45360-D80,S01 *D010- 0000000000.00045-D80
*D012- 0000000000.00226-D80 *F001- 0000000005.44320-D80 *F002- 0000000000.40824-D80
*F003- 0000000000.58968-D80 *F004- 0000000000.00226-D80 *F005- 0000000000.27216-D80
*F006- 0000000000.00226-D80 *F007- 0000000002.72160-D80 *F008- 0000000000.00226-D80
*F009- 0000000005.89680-D80 *F027- 0000000000.11340-D80,T03,S01 *F028- 0000000000.11340-D80
*K044- 0000000009.97920-T04 *P001- - *P002- -
*P003- - *P004- - *P005- -
*P006- - *P007- - *P008- -
*P009- - *P015- 0000000001.36080-D80 *P018- 0000000000.00045-D80
*P010- - *P011- - *P012- -
*P013- - *P014- - *P016- -

NAME OF CONTACT FACILITY PHONE GEN TRA TSD TSD FLAG

*WASTE CODE - QUANTITY OF WASTE IN METRIC TONS/YR - CODE FOR PROCES USED TO HANDLE WASTE

*P029-	*P032-	*P035-
*P039- 0000000000.00000-	*P030- 0000000000.49896-D83	*P031-
*P033-	*P034-	*P036-
*P037-	*P038-	*P040- 0000000000.00000-
*P041-	*P042-	*P043-
*P044-	*P045-	*P046-
*P047-	*P048-	*P049-
*P053-	*P050-	*P051-
*P054-	*P056-	*P057-
*P058-	*P059-	*P060-
*P062-	*P063-	*P064-
*P065-	*P066-	*P067-
*P068-	*P069-	*P073-
*P074- 0000000000.00226-D83	*P075- 0000000000.00226-D80	*P076-
*P077-	*P070-	*P071-
*P072-	*P078-	*P083-
*P081-	*P082-	*P084-
*P085-	*P087-	*P088-
*P089-	*P090-	*P095- 0000000000.00226-D80
*P098- 0000000000.00226-D83	*P092-	*P093-
*P094-	*P096-	*P097-
*P099-	*P104- 0000000000.00226-D83	*P106- 0000000000.00226-D83
*P107- 0000000000.00226-D80	*P105- 0000000000.00181-D80	*P101-
*P102-	*P103-	*P108-
*P109-	*P113- 0000000000.00090-D80	*P115- 0000000000.00226-D80
*P110-	*P111-	*P112-
*P114-	*P116-	*P118-
*P119-	*P120- 0000000000.00226-D80	*P121- 0000000000.00226-D83
*P122-	*P123-	*U001- 0000000000.00226-D80
*U002- 0000000000.56700-D80,T03,S01	*U003- 0000000000.05896-D80	*U004- 0000000000.00226-D80
*U009- 0000000000.00226-D80	*U005-	*U006-
*U007-	*U008-	*U011- 0000000000.00226-D80
*U012- 0000000000.00226-D80	*U013-	*U014- 0000000000.00226-D80
*U017- 0000000000.00226-D80	*U019- 0000000000.00680-D80	*U010- 0000000000.00226-D80
*U015-	*U016-	*U018-
*U020- 0000000000.00226-D80	*U021- 0000000000.00226-D80	*U023- 0000000000.00226-D80
*U022- 0000000000.00771-D80	*U024-	*U025-
*U026-	*U027-	*U028-
*U029-	*U031- 0000000000.00226-D80	*U032- 0000000000.00226-
*U037- 0000000000.00226-D80	*U030-	*U033-
*U034-	*U035-	*U036-
*U038-	*U039-	*U044- 0000000000.22680-D80
*U048- 0000000000.00226-D80	*U043- 0000000000.63504-D80	*U045- 0000000000.00045-D80
*U041-	*U042-	*U046-
*U047-	*U049-	*U052- 0000000000.00226-D80
*U056- 0000000000.04082-D80	*U057- 0000000000.00226-D80	*U050-
*U051-	*U053-	*U055-
*U058-	*U059-	*U063- 0000000000.00226-D80

*P099- -
*P107- 0000000000.00226-D80
*P102- -
*P109- -
*P110- -
*P114- -
*P119- -
*P122- -
*U002- 0000000000.56700-D80,T03,S01
*U009- 0000000000.00226-D80
*U007- -
*U012- 0000000000.00226-D80
*U017- 0000000000.00226-D80
*U015- -
*U020- 0000000000.00226-D80
*U022- 0000000000.00771-D80
*U026- -
*U029- -
*U037- 0000000000.00226-D80
*U034- -
*U038- -
*U048- 0000000000.00226-D80
*U041- -
*U047- -
*U056- 0000000000.04082-D80
*U051- -
*U053- -
*U068- 0000000000.00226-D80
*U061- -
*U066- -
*U071- 0000000000.00226-D80
*U077- 0000000000.00226-D80
*U076- -
*U080- 0000000000.02268-D80

*P104- 0000000000.00226-D83
*P105- 0000000000.00181-D80
*P103- -
*P113- 0000000000.00090-D80
*P111- -
*P116- -
*P120- 0000000000.00226-D80
*P123- -
*U003- 0000000000.05896-D80
*U005- -
*U008- -
*U013- -
*U019- 0000000000.00680-D80
*U016- -
*U021- 0000000000.00226-D80
*U024- -
*U027- -
*U031- 0000000000.00226-D80
*U030- -
*U035- -
*U039- -
*U043- 0000000000.63504-D80
*U042- -
*U049- -
*U057- 0000000000.00226-D80
*U053- -
*U059- -
*U069- 0000000000.00226-D80
*U062- -
*U067- -
*U072- 0000000000.00226-D80
*U073- -
*U078- -
*U081- 0000000000.00226-D80

*P101- -
*P108- -
*P115- 0000000000.00226-D80
*P112- -
*P118- -
*P121- 0000000000.00226-D83
*U001- 0000000000.00226-D80
*U004- 0000000000.00226-D80
*U006- -
*U011- 0000000000.00226-D80
*U014- 0000000000.00226-D80
*U010- 0000000000.00226-D80
*U018- -
*U023- 0000000000.00226-D80
*U025- -
*U028- -
*U032- 0000000000.00226-
*U033- -
*U036- -
*U044- 0000000000.22680-D80
*U045- 0000000000.00045-D80
*U046- -
*U052- 0000000000.00226-D80
*U050- -
*U055- -
*U063- 0000000000.00226-D80
*U060- -
*U064- -
*U070- 0000000000.00181-D80
*U075- 0000000000.00771-D80
*U074- -
*U079- -
*U088- 0000000000.00226-D80

*U082- -
*U083- -
*U084- -

FORM NO 419

from RCRA Facility Assessment - known wastes.

1. Radioactive waste: uranium
   strontium
   tritium
   plutonium
   polonium
   cesium

2. PCB's

3. electrochemistry processing wastes:

   Chromate - and cyanide - containing plating wastes

   acid / base waste heavily contaminated with dissolved copper.

4. Isotope separation wastes:

   nitric and sulfuric acid waste

5. Shop Department wastes

   lithium metal and lithium hydride waste.

6. Explosive waste.

7. HCl

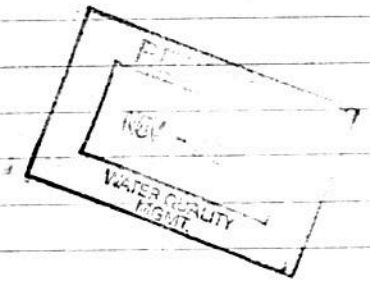
8. beryllium

9. Mercury

10. lead

11. hexachlorobutadiene.

12. paint or photographic waste



(1) It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using either an EPA test method or an equivalent test method approved by the Administrator under the procedures set forth in §§ 260.20 and 260.21. The EPA test method for pH is specified as Method 5.2 in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods" (incorporated by reference, see § 260.11).

(2) It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55°C (130°F) as determined by the test method specified in NACE (National Association of Corrosion Engineers) Standard TM-01-69 as standardized in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods" (incorporated by reference, see § 260.11) or an equivalent test method approved by the Administrator under the procedures set forth in §§ 260.20 and 260.21.

(b) A solid waste that exhibits the characteristic of corrosivity, but is not listed as a hazardous waste in Subpart D, has the EPA Hazardous Waste Number of D002.

[45 FR 33119, May 19, 1980, as amended at 46 FR 35247, July 7, 1981]

§ 261.23 Characteristic of reactivity.

(a) A solid waste exhibits the characteristic of reactivity if a representative sample of the waste has *any* of the following properties:

(1) It is normally unstable and readily undergoes violent change without detonating.

(2) It reacts violently with water.

(3) It forms potentially explosive mixtures with water.

(4) When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

(5) It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.

(6) It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.

(7) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

(8) It is a forbidden explosive as defined in 49 CFR 173.51, or a Class A explosive as defined in 49 CFR 173.53 or a Class B explosive as defined in 49 CFR 173.88.

(b) A solid waste that exhibits the characteristic of reactivity, but is not listed as a hazardous waste in Subpart D, has the EPA Hazardous Waste Number of D003.

§ 261.24 Characteristic of EP toxicity.

(a) A solid waste exhibits the characteristic of EP toxicity if, using the test methods described in Appendix II or equivalent methods approved by the Administrator under the procedures set forth in §§ 260.20 and 260.21, the extract from a representative sample of the waste contains any of the contaminants listed in Table I at a concentration equal to or greater than the respective value given in that Table. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering, is considered to be the extract for the purposes of this section.

(b) A solid waste that exhibits the characteristic of EP toxicity, but is not listed as a hazardous waste in Subpart D, has the EPA Hazardous Waste Number specified in Table I which corresponds to the toxic contaminant causing it to be hazardous.

TABLE I—MAXIMUM CONCENTRATION OF CONTAMINANTS FOR CHARACTERISTIC OF EP TOXICITY

EPA hazardous waste number	Contaminant	Maximum concentration (milligrams per liter)
D004	Arsenic	5.0
D005	Barium	100.0
D006	Cadmium	1.0
D007	Chromium	5.0
D008	Lead	5.0
D009	Mercury	0.2
D010	Selenium	1.0
D011	Silver	5.0

TABLE I—MAXIMUM CONCENTRATION OF CONTAMINANTS FOR CHARACTERISTIC OF EP TOXICITY—Continued

EPA hazardous waste number	Contaminant	Maximum concentration (milligrams per liter)
D012	Endrin (1,2,3,4,10,10-hexachloro-1,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo, endo-5,8-dimethano-naphthalene.	0.02
D013	Lindane (1,2,3,4,5,6-hexa- chlorocyclohexane, gamma isomer.	0.4
D014	Methoxychlor (1,1,1-Trichloro-2,2-bis [p-methoxyphenyl]ethane).	10.0
D015	Toxaphene ($C_{10}H_{10}Cl_8$, Technical chlorinated camphene, 67-69 percent chlorine).	0.5
D016	2,4-D, (2,4-Dichlorophenoxyacetic acid).	10.0
D017	2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid).	1.0

Subpart D—Lists of Hazardous Wastes

§ 261.30 General.

(a) A solid waste is a hazardous waste if it is listed in this subpart, unless it has been excluded from this list under §§ 260.20 and 260.22.

(b) The Administrator will indicate his basis for listing the classes or types of wastes listed in this Subpart by employing one or more of the following Hazard Codes:

Ignitable Waste	(I)
Corrosive Waste	(C)
Reactive Waste	(R)
EP Toxic Waste	(E)
Acute Hazardous Waste	(H)
Toxic Waste	(T)

Appendix VII identifies the constituent which caused the Administrator to list the waste as an EP Toxic Waste (E) or Toxic Waste (T) in §§ 261.31 and 261.32.

(c) Each hazardous waste listed in this subpart is assigned an EPA Hazardous Waste Number which precedes the name of the waste. This number must be used in complying with the notification requirements of Section 3010 of the Act and certain recordkeeping and reporting requirements under Parts 262 through 265 and Part 270 of this chapter.

(d) The following hazardous wastes listed in § 261.31 or § 261.32 are subject to the exclusion limits for acutely hazardous wastes established in § 261.5: EPA Hazardous Wastes Nos. FO20, FO21, FO22, FO23, FO26, and FO27.

[45 FR 33119, May 19, 1980, as amended at 48 FR 14294, Apr. 1, 1983; 50 FR 2000, Jan. 14, 1985]

§ 261.31 Hazardous wastes from non-specific sources.

The following solid wastes are listed hazardous wastes from non-specific sources unless they are excluded under §§ 260.20 and 260.22 and listed in Appendix IX.

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
Generic:		
F001	The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F002	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
F003	The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and, a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I)*
F004	The following spent non-halogenated solvents: Cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F005	The following spent non-halogenated solvents: Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I,T)
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.	(T)
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum	(T)
F007	Spent cyanide plating bath solutions from electroplating operations	(R, T)
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.	(R, T)
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.	(R, T)
F010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.	(R, T)
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.	(R, T)
F012	Quenching waste water treatment sludges from metal heat treating operations where cyanides are used in the process.	(T)
F024	Wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes from the production of chlorinated aliphatic hydrocarbons, having carbon content from one to five, utilizing free radical catalyzed processes. (This listing does not include light ends, spent filters and filter aids, spent desiccants, wastewater, wastewater treatment sludges, spent catalysts, and wastes listed in § 261.32.).	(T)
F020	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol.).	(H)
F021	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.	(H)
F022	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.	(H)
F023	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of Hexachlorophene from highly purified 2,4,5-trichlorophenol.).	(H)
F026	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.	(H)
F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing Hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.).	(H)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
F028	Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027.	(T)

*(I,T) should be used to specify mixtures containing ignitable and toxic constituents.

[46 FR 4617, Jan. 16, 1981, as amended at 46 FR 27477, May 20, 1981; 49 FR 5312, Feb. 10, 1984; 49 FR 37070, Sept. 21, 1984; 50 FR 665, Jan. 4, 1985; 50 FR 2000, Jan. 14, 1985; 50 FR 53319, Dec. 31, 1985; 51 FR 2702, Jan. 21, 1986; 51 FR 6541, Feb. 25, 1986]

EFFECTIVE DATE NOTE: At 51 FR 6541, Feb. 25, 1986, in § 261.31, waste streams "F003" and "F005" in the subgroup "Generic" were revised, effective August 25, 1986. For the convenience of the user, the superseded text is set forth as follows:

§ 261.31 Hazardous wastes from non-specific sources.

* * * * *

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
Generic:		
F002	* * * * * * * The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, and trichlorofluoromethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F001, F004, and, F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
F005	* * * The following spent non-halogenated solvents: Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, and pyridine; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I,T)*

*(I,T) should be used to specify mixtures containing ignitable and toxic constituents.

* * * * *

§ 261.32 Hazardous wastes from specific sources.

The following solid wastes are listed hazardous wastes from specific sources unless they are excluded under §§ 260.20 and 260.22 and listed in Appendix IX.

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
Wood preservation: K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
Inorganic pigments:		
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments.	(T)
K003	Wastewater treatment sludge from the production of molybdate orange pigments	(T)
K004	Wastewater treatment sludge from the production of zinc yellow pigments	(T)
K005	Wastewater treatment sludge from the production of chrome green pigments	(T)
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).	(T)
K007	Wastewater treatment sludge from the production of iron blue pigments	(T)
K008	Oven residue from the production of chrome oxide green pigments	(T)
Organic chemicals:		
K009	Distillation bottoms from the production of acetaldehyde from ethylene	(T)
K010	Distillation side cuts from the production of acetaldehyde from ethylene	(T)
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile	(R, T)
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile	(R, T)
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile	(T)
K015	Still bottoms from the distillation of benzyl chloride	(T)
K016	Heavy ends or distillation residues from the production of carbon tetrachloride	(T)

used to hold any off-specification chemical product and manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraph (e) of this section, unless the container is empty as defined in § 261.7(b)(3) of this chapter.

[*Comment:* Unless the residue is being beneficially used or reused, or legitimately recycled or reclaimed; or being accumulated, stored, transported or treated prior to such use, re-use, recycling or reclamation, EPA considers the residue to be intended for discard, and thus a hazardous waste. An example of a legitimate re-use of the residue would be where the residue remains in the container and the container is used to hold the same commercial chemical product or manufacturing chemical product or manufacturing chemical intermediate it previously held. An example of the discard of the residue would be where the drum is sent to a drum reconditioner who reconditions the drum but discards the residue.]

(d) Any residue or contaminated soil, water or other debris resulting from the cleanup of a spill into or on any land or water of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in paragraph (e) or (f) of this section, or any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification chemical product and manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraph (e) or (f) of this section.

[*Comment:* The phrase "commercial chemical product or manufacturing chemical intermediate having the generic name listed in . . ." refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in paragraph (e) or (f). Where a manufacturing process waste is deemed to be a hazardous waste because it contains a substance listed in paragraph (e) or (f), such waste will be listed in either § 261.31 or § 261.32 or will be identified as a hazardous waste by the characteristics set forth in Subpart C of this part.]

(e) The commercial chemical products, manufacturing chemical intermediates or off-specification commercial chemical products or manufacturing chemical intermediates referred to in paragraphs (a) through (d) of this section, are identified as acute hazardous wastes (H) and are subject to be the small quantity exclusion defined in § 261.5(e).

[*Comment:* For the convenience of the regulated community the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), and R (Reactivity). Absence of a letter indicates that the compound only is listed for acute toxicity.]

These wastes and their corresponding EPA Hazardous Waste Numbers are:

Hazardous waste No.	Substance
P023	Acetaldehyde, chloro-
P002	Acetamide, N-(aminothioxomethyl)-
P057	Acetamide, 2-fluoro-
P058	Acetic acid, fluoro-, sodium salt
P001	Acetimidic acid, N-[(methylcarbamoyl)oxy]thio-, methyl ester 3-(alpha-Acetonylbenzyl)-4-hydroxycoumarin and salts, when present at concentrations greater than 0.3%
P002	1-Acetyl-2-thiourea
P003	Acrolein
P070	Aldicarb
P004	Aldrin
P005	Allyl alcohol
P006	Aluminum phosphide
P007	5-(Aminomethyl)-3-isoxazolol
P008	4-Aminopyridine
P009	Ammonium picrate (R)
P119	Ammonium vanadate
P010	Arsenic acid
P012	Arsenic (III) oxide
P011	Arsenic (V) oxide
P011	Arsenic pentoxide
P012	Arsenic trioxide
P038	Arsine, diethyl-
P054	Aziridine
P013	Barium cyanide
P024	Benzenamine, 4-chloro-
P077	Benzenamine, 4-nitro-
P028	Benzene, (chloromethyl)-
P042	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-
P014	Benzenethiol
P028	Benzyl chloride
P015	Beryllium dust
P016	Bis(chloromethyl) ether
P017	Bromoacetone
P018	Brucine
P021	Calcium cyanide
P123	Camphene, octachloro-
P103	Carbamimidoselenoic acid
P022	Carbon bisulfide
P022	Carbon disulfide
P095	Carbonyl chloride

Hazardous waste No.	Substance
P033	Chlorine cyanide
P023	Chloroacetaldehyde
P024	p-Chloroaniline
P026	1-(o-Chlorophenyl)thiourea
P027	3-Chloropropionitrile
P029	Copper cyanides
P030	Cyanides (soluble cyanide salts), not elsewhere specified
P031	Cyanogen
P033	Cyanogen chloride
P036	Dichlorophenylarsine
P037	Dieldrin
P038	Diethylarsine
P039	O,O-Diethyl S-[2-(ethylthio)ethyl] phosphorodithioate
P041	Diethyl-p-nitrophenyl phosphate
P040	O,O-Diethyl O-pyrazinyl phosphorothioate
P043	Diisopropyl fluorophosphate
P044	Dimethoate
P045	3,5-Dimethyl-1-(methylthio)-2-butanone, O-[(methylamino)carbonyl] oxime
P071	O,O-Dimethyl O-p-nitrophenyl phosphorothioate
P082	Dimethylnitrosamine
P046	alpha, alpha-Dimethylphenethylamine
P047	4,6-Dinitro-o-cresol and salts
P034	4,6-Dinitro-o-cyclohexylphenol
P048	2,4-Dinitrophenol
P020	Dinoseb
P085	Diphosphoramide, octamethyl-
P039	Disulfoton
P049	2,4-Dithiobiuret
P108	Dithiopyrophosphoric acid, tetraethyl ester
P050	Endosulfan
P088	Endothall
P051	Endrin
P042	Epinephrine
P046	Ethanamine, 1,1-dimethyl-2-phenyl-
P084	Ethanamine, N-methyl-N-nitroso-
P101	Ethyl cyanide
P054	Ethyleneimine
P097	Famphur
P056	Fluorine
P057	Fluoroacetamide
P058	Fluoroacetic acid, sodium salt
P065	Fulminic acid, mercury(II) salt (R,T)
P059	Heptachlor
P051	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,endo-1,4:5,8-dimethanonaphthalene
P037	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,exo-1,4:5,8-dimethanonaphthalene
P060	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo, endo-dimethanonaphthalene
P004	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo,exo-dimethanonaphthalene
P060	Hexachlorohexahydro-exo,exo-dimethanonaphthalene
P062	Hexaethyl tetraphosphate
P116	Hydrazinecarbothioamide
P068	Hydrazine, methyl-
P063	Hydrocyanic acid
P063	Hydrogen cyanide
P096	Hydrogen phosphide
P064	Isocyanic acid, methyl ester
P007	3(2H)-Isoxazolone, 5-(aminomethyl)-
P092	Mercury, (acetato-O)phenyl-
P065	Mercury fulminate (R,T)
P016	Methane, oxybis(chloro-

Hazardous waste No.	Substance
P112	Methane, tetranitro- (R)
P118	Methanethiol, trichloro-
P059	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-
P066	Methomyl
P067	2-Methylaziridine
P068	Methyl hydrazine
P064	Methyl isocyanate
P069	2-Methyllactonitrile
P071	Methyl parathion
P072	alpha-Naphthylthiourea
P073	Nickel carbonyl
P074	Nickel cyanide
P074	Nickel(II) cyanide
P073	Nickel tetracarbonyl
P075	Nicotine and salts
P076	Nitric oxide
P077	p-Nitroaniline
P078	Nitrogen dioxide
P076	Nitrogen(II) oxide
P078	Nitrogen(IV) oxide
P081	Nitroglycerine (R)
P082	N-Nitrosodimethylamine
P084	N-Nitrosomethylvinylamine
P050	5-Norbornene-2,3-dimethanol, 1,4,5,6,7,7-hexachloro, cyclic sulfite
P085	Octamethylpyrophosphoramide
P087	Osmium oxide
P087	Osmium tetroxide
P088	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
P089	Parathion
P034	Phenol, 2-cyclohexyl-4,6-dinitro-
P048	Phenol, 2,4-dinitro-
P047	Phenol, 2,4-dinitro-6-methyl-
P020	Phenol, 2,4-dinitro-6-(1-methylpropyl)-
P009	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P036	Phenyl dichloroarsine
P092	Phenylmercuric acetate
P093	N-Phenylthiourea
P094	Phorate
P095	Phosgene
P096	Phosphine
P041	Phosphoric acid, diethyl p-nitrophenyl ester
P044	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl]ester
P043	Phosphorofluoric acid, bis(1-methylethyl)-ester
P094	Phosphorothioic acid, O,O-diethyl S-(ethylthio)methyl ester
P089	Phosphorothioic acid, O,O-diethyl O-(p-nitrophenyl) ester
P040	Phosphorothioic acid, O,O-diethyl O- pyrazinyl ester
P087	Phosphorothioic acid, O,O-dimethyl O-[p-[(dimethylamino)-sulfonyl]phenyl]ester
P110	Plumbane, tetraethyl-
P098	Potassium cyanide
P099	Potassium silver cyanide
P070	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime
P101	Propanenitrile
P027	Propanenitrile, 3-chloro-
P069	Propanenitrile, 2-hydroxy-2-methyl-
P081	1,2,3-Propanetriol, trinitrate- (R)
P017	2-Propanone, 1-bromo-
P102	Propargyl alcohol
P003	2-Propenal
P005	2-Propen-1-ol
P067	1,2-Propylenimine
P102	2-Propyn-1-ol
P008	4-Pyridinamine

Hazardous waste No.	Substance
P075	Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts
P111	Pyrophosphoric acid, tetraethyl ester
P103	Selenourea
P104	Silver cyanide
P105	Sodium azide
P106	Sodium cyanide
P107	Strontium sulfide
P108	Strychnidin-10-one, and salts
P018	Strychnidin-10-one, 2,3-dimethoxy-
P108	Strychnine and salts
P115	Sulfuric acid, thallium(I) salt
P109	Tetraethyldithiopyrophosphate
P110	Tetraethyl lead
P111	Tetraethylpyrophosphate
P112	Tetranitromethane (R)
P062	Tetraphosphoric acid, hexaethyl ester
P113	Thallic oxide
P113	Thallium(III) oxide
P114	Thallium(I) selenite
P115	Thallium(I) sulfate
P045	Thiofanox
P049	Thioimidodicarbonic diamide
P014	Thiophenol
P116	Thiosemicarbazide
P026	Thiourea, (2-chlorophenyl)-
P072	Thiourea, 1-naphthalenyl-
P093	Thiourea, phenyl-
P123	Toxaphene
P118	Trichloromethanethiol
P119	Vanadic acid, ammonium salt
P120	Vanadium pentoxide
P120	Vanadium(V) oxide
P001	Warfarin, when present at concentrations greater than 0.3%
P121	Zinc cyanide
P122	Zinc phosphide (R,T)
P122	Zinc phosphide, when present at concentrations greater than 10%

(f) The commercial chemical products, manfacturing chemical intermediates, or off-specification commercial chemical products referred to in paragraphs (a) through (d) of this section, are identified as toxic wastes (T), unless otherwise designated and are subject to the small quantity generator exclusion defined in § 261.5 (a) and (g).

[*Comment:* For the convenience of the regulated community, the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), R (Reactivity), I (Ignitability) and C (Corrosivity). Absence of a letter indicates that the compound is only listed for toxicity.]

These wastes and their corresponding EPA Hazardous Waste Numbers are:

Hazardous Waste No.	Substance
U001	Acetaldehyde (I)
U034	Acetaldehyde, trichloro-
U187	Acetamide, N-(4-ethoxyphenyl)-
U005	Acetamide, N-9H-fluoren-2-yl-
U112	Acetic acid, ethyl ester (I)
U144	Acetic acid, lead salt
U214	Acetic acid, thallium(I) salt
U002	Acetone (I)
U003	Acetonitrile (I,T)
U248	3-(alpha-Acetonylbenzyl)-4-hydroxycoumarin and salts, when present at concentrations of 0.3% or less
U004	Acetophenone
U005	2-Acetylaminofluorene
U006	Acetyl chloride (C,R,T)
U007	Acrylamide
U008	Acrylic acid (I)
U009	Acrylonitrile
U150	Alanine, 3-(p-bis(2-chloroethyl)amino] phenyl-, L-
U328	2-Amino-1-methylbenzene
U353	4-Amino-1-methylbenzene
U011	Amitrole
U012	Aniline (I,T)
U014	Auramine
U015	Azaserine
U010	Azirino(2',3':3,4)pyrrolo(1,2-a)indole-4,7-dione, 6-amino-8-[[(aminocarbonyl) oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-
U157	Benz[j]acenanthrylene, 1,2-dihydro-3-methyl-
U016	Benz[c]acridine
U016	3,4-Benzacridine
U017	Benzal chloride
U018	Benz[a]anthracene
U018	1,2-Benzanthracene
U094	1,2-Benzanthracene, 7,12-dimethyl-
U012	Benzenamine (I,T)
U014	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl-
U049	Benzenamine, 4-chloro-2-methyl-
U093	Benzenamine, N,N'-dimethyl-4-phenylazo-
U158	Benzenamine, 4,4'-methylenebis(2-chloro-
U222	Benzenamine, 2-methyl-, hydrochloride
U181	Benzenamine, 2-methyl-5-nitro
U019	Benzene (I,T)
U038	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy, ethyl ester
U030	Benzene, 1-bromo-4-phenoxy-
U037	Benzene, chloro-
U190	1,2-Benzenedicarboxylic acid anhydride
U028	1,2-Benzenedicarboxylic acid, [bis(2-ethylhexyl)] ester
U069	1,2-Benzenedicarboxylic acid, dibutyl ester
U088	1,2-Benzenedicarboxylic acid, diethyl ester
U102	1,2-Benzenedicarboxylic acid, dimethyl ester
U107	1,2-Benzenedicarboxylic acid, di-n-octyl ester
U070	Benzene, 1,2-dichloro-
U071	Benzene, 1,3-dichloro-
U072	Benzene, 1,4-dichloro-
U017	Benzene, (dichloromethyl)-
U223	Benzene, 1,3-diisocyanatomethyl- (R,T)
U239	Benzene, dimethyl-(I,T)
U201	1,3-Benzenediol
U127	Benzene, hexachloro-
U056	Benzene, hexahydro- (I)
U188	Benzene, hydroxy-
U220	Benzene, methyl-
U105	Benzene, 1-methyl-1-2,4-dinitro-
U106	Benzene, 1-methyl-2,6-dinitro-
U203	Benzene, 1,2-methylenedioxy-4-allyl-
U141	Benzene, 1,2-methylenedioxy-4-propenyl-

Hazardous Waste No.	Substance
U090	Benzene, 1,2-methylenedioxy-4-propyl-
U055	Benzene, (1-methylethyl)- (I)
U169	Benzene, nitro- (I,T)
U183	Benzene, pentachloro-
U185	Benzene, pentachloro-nitro-
U020	Benzenesulfonic acid chloride (C,R)
U020	Benzenesulfonyl chloride (C,R)
U207	Benzene, 1,2,4,5-tetrachloro-
U023	Benzene, (trichloromethyl)-(C,R,T)
0234	Benzene, 1,3,5-trinitro- (R,T)
U021	Benzidine
U202	1,2-Benzisothiazolin-3-one, 1,1-dioxide
U120	Benzo[j,k]fluorene
U022	Benzo[a]pyrene
U022	3,4-Benzopyrene
U197	p-Benzoquinone
U023	Benzotrichloride (C,R,T)
U050	1,2-Benzphenanthrene
U095	2,2'-Bioxirane (I,T)
U021	(1,1'-Biphenyl)-4,4'-diamine
U073	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dichloro-
U091	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy-
U095	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl-
U024	Bis(2-chloroethoxy) methane
U027	Bis(2-chloroisopropyl) ether
U244	Bis(dimethylthiocarbamoyl) disulfide
U028	Bis(2-ethylhexyl) phthalate
U246	Bromine cyanide
U225	Bromoform
U030	4-Bromophenyl phenyl ether
U129	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
U172	1-Butanamine, N-butyl-N-nitroso-
U035	Butanoic acid, 4-[Bis(2-chloroethyl)amino] benzene-
U031	1-Butanol (I)
U159	2-Butanone (I,T)
U160	2-Butanone peroxide (R,T)
U053	2-Butenal
U074	2-Butene, 1,4-dichloro- (I,T)
U031	n-Butyl alcohol (I)
U136	Cacodylic acid
U032	Calcium chromate
U238	Carbamic acid, ethyl ester
U178	Carbamic acid, methylnitroso-, ethyl ester
U176	Carbamide, N-ethyl-N-nitroso-
U177	Carbamide, N-methyl-N-nitroso-
U219	Carbamide, thio-
U097	Carbamoyl chloride, dimethyl-
U215	Carbonic acid, dithallium(I) salt
U156	Carbonochloridic acid, methyl ester (I,T)
U033	Carbon oxyfluoride (R,T)
U211	Carbon tetrachloride
U033	Carbonyl fluoride (R,T)
U034	Chloral
U035	Chlorambucil
U036	Chlordane, technical
U026	Chlornaphazine
U037	Chlorobenzene
U039	4-Chloro-m-cresol
U041	1-Chloro-2,3-epoxypropane
U042	2-Chloroethyl vinyl ether
U044	Chloroform
U046	Chloromethyl methyl ether
U047	beta-Chloronaphthalene
U048	o-Chlorophenol
U049	4-Chloro-o-toluidine, hydrochloride
U032	Chromic acid, calcium salt
U050	Chrysene
U051	Creosote
U052	Cresols
U052	Cresylic acid
U053	Crotonaldehyde

Hazardous Waste No.	Substance
U055	Cumene (I)
U246	Cyanogen bromide
U197	1,4-Cyclohexadienedione
U056	Cyclohexane (I)
U057	Cyclohexanone (I)
U130	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexa- chloro-
U058	Cyclophosphamide
U240	2,4-D, salts and esters
U059	Daunomycin
U060	DDD
U061	DDT
U142	Decachlorooctahydro-1,3,4-methano-2H-cyclobuta[c,d]-pentalen-2-one
U062	Diallate
U133	Diamine (R,T)
U221	Diaminotoluene
U063	Dibenz[a,h]anthracene
U063	1,2:5,6-Dibenzanthracene
U064	1,2:7,8-Dibenzopyrene
U064	Dibenz[a,i]pyrene
U066	1,2-Dibromo-3-chloropropane
U069	Dibutyl phthalate
U062	S-(2,3-Dichloroallyl) diisopropylthiocarbamate
U070	o-Dichlorobenzene
U071	m-Dichlorobenzene
U072	p-Dichlorobenzene
U073	3,3'-Dichlorobenzidine
U074	1,4-Dichloro-2-butene (I,T)
U075	Dichlorodifluoromethane
U192	3,5-Dichloro-N-(1,1-dimethyl-2-propynyl) benzamide
U060	Dichloro diphenyl dichloroethane
U061	Dichloro diphenyl trichloroethane
U078	1,1-Dichloroethylene
U079	1,2-Dichloroethylene
U025	Dichloroethyl ether
U081	2,4-Dichlorophenol
U082	2,6-Dichlorophenol
U240	2,4-Dichlorophenoxyacetic acid, salts and esters
U083	1,2-Dichloropropane
U084	1,3-Dichloropropene
U085	1,2:3,4-Diepoxybutane (I,T)
U108	1,4-Diethylene dioxide
U086	N,N-Diethylhydrazine
U087	O,O-Diethyl-S-methyl-dithiophosphate
U088	Diethyl phthalate
U089	Diethylstilbestrol
U148	1,2-Dihydro-3,6-pyridazinedione
U090	Dihydrosafrole
U091	3,3'-Dimethoxybenzidine
U092	Dimethylamine (I)
U093	Dimethylaminoazobenzene
U094	7,12-Dimethylbenz[a]anthracene
U095	3,3'-Dimethylbenzidine
U096	alpha,alpha-Dimethylbenzylhydroperoxide (R)
U097	Dimethylcarbamoyl chloride
U098	1,1-Dimethylhydrazine
U099	1,2-Dimethylhydrazine
U101	2,4-Dimethylphenol
U102	Dimethyl phthalate
U103	Dimethyl sulfate
U105	2,4-Dinitrotoluene
U106	2,6-Dinitrotoluene
U107	Di-n-octyl phthalate
U108	1,4-Dioxane
U109	1,2- Diphenylhydrazine
U110	Dipropylamine (I)
U111	Di-N-propylnitrosamine
U001	Ethanal (I)
U174	Ethanamine, N-ethyl-N-nitroso-
U067	Ethane, 1,2-dibromo-

Hazardous Waste No.	Substance
U076	Ethane, 1,1-dichloro-
U077	Ethane, 1,2-dichloro-
U114	1,2-Ethanediylbiscarbamodithioic acid
U131	Ethane, 1,1,1,2,2,2-hexachloro-
U024	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-
U003	Ethanenitrile (I, T)
U117	Ethane,1,1'-oxybis- (I)
U025	Ethane, 1,1'-oxybis[2-chloro-
U184	Ethane, pentachloro-
U208	Ethane, 1,1,1,2-tetrachloro-
U209	Ethane, 1,1,2,2-tetrachloro-
U218	Ethanethioamide
U247	Ethane, 1,1,1,-trichloro-2,2-bis(p-methoxyphenyl).
U227	Ethane, 1,1,2-trichloro-
U043	Ethene, chloro-
U042	Ethene, 2-chloroethoxy-
U078	Ethene, 1,1-dichloro-
U079	Ethene, trans-1,2-dichloro-
U210	Ethene, 1,1,2,2-tetrachloro-
U173	Ethanol, 2,2'-(nitrosoimino)bis-
U004	Ethanone, 1-phenyl-
U006	Ethanoyl chloride (C,R,T)
U359	2-Ethoxyethanol.
U112	Ethyl acetate (I)
U113	Ethyl acrylate (I)
U238	Ethyl carbamate (urethan)
U038	Ethyl 4,4'-dichlorobenzilate
U359	Ethylene glycol monoethyl ether.
U114	Ethylenebis(dithiocarbamic acid)
U067	Etylene dibromide
U077	Ethylene dichloride
U115	Ethlene oxide (I,T)
U116	Ethylene thiourea
U117	Ethyl ether (I)
U076	Ethylidene dichloride
U118	Ethylmethacrylate
U119	Ethyl methanesulfonate
U139	Ferric dextran
U120	Fluoranthene
U122	Formaldehyde
U123	Formic acid (C,T)
U124	Furan (I)
U125	2-Furancarboxaldehyde (I)
U147	2,5-Furandione
U213	Furan, tetrahydro- (I)
U125	Furfural (I)
U124	Furfuran (I)
U206	D-Glucopyranose, 2-deoxy-2(3-methyl-3-nitrosoureido)-
U126	Glycidylaldehyde
U163	Guanidine, N-nitroso-N-methyl-N'nitro-
U127	Hexachlorobenzene
U128	Hexachlorobutadiene
U129	Hexachlorocyclohexane (gamma isomer)
U130	Hexachlorocyclopentadiene
U131	Hexachloroethane
U132	Hexachlorophene
U243	Hexachloropropene
U133	Hydrazine (R,T)
U086	Hydrazine, 1,2-diethyl-
U098	Hydrazine, 1,1-dimethyl-
U099	Hydrazine, 1,2-dimethyl-
U109	Hydrazine, 1,2-diphenyl-
U134	Hydrofluoric acid (C,T)
U134	Hydrogen fluoride (C,T)
U135	Hydrogen sulfide
U096	Hydroperoxide, 1-methyl-1-phenylethyl- (R)
U136	Hydroxydimethylarsine oxide
U116	2-Imidazolidinethione
U137	Indeno(1,2,3-cd)pyrene
U139	Iron dextran
U140	Isobutyl alcohol (I,T)
U141	Isosafrole
U142	Kepone
U143	Lasiocarpine
U144	Lead acetate
U145	Lead phosphate
U146	Lead subacetate
U129	Lindane
U147	Maleic anhydride
U148	Maleic hydrazide
U149	Malononitrile
U150	Melphalan
U151	Mercury
U152	Methacrylonitrile (I,T)
U092	Methanamine, N-methyl- (I)
U029	Methane, bromo-
U045	Methane, chloro- (I,T)
U046	Methane, chloromethoxy-
U068	Methane, dibromo-
U080	Methane, dichloro-
U075	Methane, dichlorodifluoro-
U138	Methane, iodo-
U119	Methanesulfonic acid, ethyl ester
U211	Methane, tetrachloro-
U121	Methane, trichlorofluoro-
U153	Methanethiol (I,T)
U225	Methane, tribromo-
U044	Methane, trichloro-
U121	Methane, trichlorofluoro-
U123	Methanoic acid (C,T)
U036	4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-3a,4,7,7a-tetrahydro-
U154	Methanol (I)
U155	Methapyrilene
U247	Methoxychlor.
U154	Methyl alcohol (I)
U029	Methyl bromide
U186	1-Methylbutadiene (I)
U045	Methyl chloride (I,T)
U156	Methyl chlorocarbonate (I,T)
U226	Methylchloroform
U157	3-Methylcholanthrene
U158	4,4'-Methylenebis(2-chloroaniline)
U132	2,2'-Methylenebis(3,4,6-trichlorophenol)
U068	Methylene bromide
U080	Methylene chloride
U122	Methylene oxide
U159	Methyl ethyl ketone (I,T)
U160	Methyl ethyl ketone peroxide (R,T)
U138	Methyl iodide
U161	Methyl isobutyl ketone (I)
U162	Methyl methacrylate (I,T)
U163	N-Methyl-N'-nitro-N-nitrosoguanidine
U161	4-Methyl-2-pentanone (I)
U164	Methylthiouracil
U010	Mitomycin C
U059	5,12-Naphthacenedione, (8S-cis)-8-acetyl-10-[(3-amino-2,3,6-trideoxy-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-
U165	Naphthalene
U047	Naphthalene, 2-chloro-
U166	1,4-Naphthalenedione
U236	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl-(1,1'-biphenyl)-4,4'diyl)-bis (azo)]bis(5-amino-4-hydroxy)-,tetrasodium salt
U166	1,4,Naphthaquinone
U167	1-Naphthylamine
U168	2-Naphthylamine
U167	alpha-Naphthylamine
U168	beta-Naphthylamine

Hazardous Waste No.	Substance
U026	2-Naphthylamine, N,N'-bis(2-chloromethyl)-
U169	Nitrobenzene (I,T)
U170	p-Nitrophenol
U171	2-Nitropropane (I,T)
U172	N-Nitrosodi-n-butylamine
U173	N-Nitrosodiethanolamine
U174	N-Nitrosodiethylamine
U111	N-Nitroso-N-propylamine
U178	N-Nitroso-N-ethylurea
U177	N-Nitroso-N-methylurea
U178	N-Nitroso-N-methylurethane
U179	N-Nitrosopiperidine
U180	N-Nitrosopyrrolidine
U181	5-Nitro-o-toluidine
U193	1,2-Oxathiolane, 2,2-dioxide
U058	2H-1,3,2-Oxazaphosphorine, 2-[bis(2-chloroethyl)amino]tetrahydro-, oxide 2-
U115	Oxirane (I,T)
U041	Oxirane, 2-(chloromethyl)-
U182	Paraldehyde
U183	Pentachlorobenzene
U184	Pentachloroethane
U185	Pentachloronitrobenzene
See F027	Pentachlorophenol
U186	1,3-Pentadiene (I)
U187	Phenacetin
U188	Phenol
U048	Phenol, 2-chloro-
U039	Phenol, 4-chloro-3-methyl-
U081	Phenol, 2,4-dichloro-
U082	Phenol, 2,6-dichloro-
U101	Phenol, 2,4-dimethyl-
U170	Phenol, 4-nitro-
See F027	Phenol, pentachloro-
Do	Phenol, 2,3,4,6-tetrachloro-
Do	Phenol, 2,4,5-trichloro-
Do	Phenol, 2,4,6-trichloro-
U137	1,10-(1,2-phenylene)pyrene
U145	Phosphoric acid, Lead salt
U087	Phosphorodithioic acid, 0,0-diethyl-, S-methyl ester
U189	Phosphorous sulfide (R)
U190	Phthalic anhydride
U191	2-Picoline
U192	Pronamide
U194	1-Propanamine (I,T)
U110	1-Propanamine, N-propyl- (I)
U066	Propane, 1,2-dibromo-3-chloro-
U149	Propanedinitrile
U171	Propane, 2-nitro- (I,T)
U027	Propane, 2,2'oxybis[2-chloro-
U193	1,3-Propane sultone
U235	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U126	1-Propanol, 2,3-epoxy-
U140	1-Propanol, 2-methyl- (I,T)
U002	2-Propanone (I)
U007	2-Propenamide
U084	Propene, 1,3-dichloro-
U243	1-Propene, 1,1,2,3,3,3-hexachloro-
U009	2-Propenenitrile
U152	2-Propenenitrile, 2-methyl- (I,T)
U008	2-Propenoic acid (I)
U113	2-Propenoic acid, ethyl ester (I)
U118	2-Propenoic acid, 2-methyl-, ethyl ester
U162	2-Propenoic acid, 2-methyl-, methyl ester (I,T)
See F027	Propionic acid, 2-(2,4,5-trichlorophenoxy)-
U194	n-Propylamine (I,T)
U083	Propylene dichloride
U196	Pyridine
U155	Pyridine, 2-[2-(dimethylamino)-2-thenylamino]-
U179	Pyridine, hexahydro-N-nitroso-
U191	Pyridine, 2-methyl-
U164	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-
U180	Pyrrole, tetrahydro-N-nitroso-
U200	Reserpine
U201	Resorcinol
U202	Saccharin and salts
U203	Safrole
U204	Selenious acid
U204	Selenium dioxide
U205	Selenium disulfide (R,T)
U015	L-Serine, diazoacetate (ester)
See F027	Silvex
U089	4,4'-Stilbenediol, alpha,alpha'-diethyl-
U206	Streptozotocin
U135	Sulfur hydride
U103	Sulfuric acid, dimethyl ester
U189	Sulfur phosphide (R)
U205	Sulfur selenide (R,T)
See F027	2,4,5-T
U207	1,2,4,5-Tetrachlorobenzene
U208	1,1,1,2-Tetrachloroethane
U209	1,1,2,2-Tetrachloroethane
U210	Tetrachloroethylene
See F027	2,3,4,6-Tetrachlorophenol
U213	Tetrahydrofuran (I)
U214	Thallium(I) acetate
U215	Thallium(I) carbonate
U216	Thallium(I) chloride
U217	Thallium(I) nitrate
U218	Thioacetamide
U153	Thiomethanol (I,T)
U219	Thiourea
U244	Thiram
U220	Toluene
U221	Toluenediamine
U223	Toluene diisocyanate (R,T)
U328	o-Toluidine
U222	O-Toluidine hydrochloride
U353	p-Toluidine
U011	1H-1,2,4-Triazol-3-amine
U226	1,1,1-Trichloroethane
U227	1,1,2-Trichloroethane
U228	Trichloroethene
U228	Trichloroethylene
U121	Trichloromonofluoromethane
See F027	2,4,5-Trichlorophenol
Do	2,4,6-Trichlorophenol
Do	2,4,5-Trichlorophenoxyacetic acid
U234	sym-Trinitrobenzene (R,T)
U182	1,3,5-Trioxane, 2,4,6-trimethyl-
U235	Tris(2,3-dibromopropyl) phosphate
U236	Trypan blue
U237	Uracil, 5[bis(2-chloromethyl)amino]-
U237	Uracil mustard
U043	Vinyl chloride
U248	Warfarin, when present at concentrations of 0.3% or less
U239	Xylene (I)
U200	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxy-benzoyl)oxy]-, methyl ester
U249	Zinc phosphide, when present at concentrations of 10% or less.

(Approved by the Office of Management and Budget under control number 2050-0047)

[45 FR 78529, 78541, Nov. 25, 1980, as amended at 46 FR 27477, May 20, 1981; 49

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TOTAL QUICK LOOK PRINT LINES: 206

FORM NO 6413 3

LISTING OF NEW MEXICO FACILITIES ALPHA ORDER

QL ********** QL

NPID	FNMS	NADI	SIC2	PERD	PERD	PERE	IADT	RDF7	RDF8
NM0020800	USDIBIA-NENAHNEZAD BOARDING SC		9512	03/07/86	03/08/85	03/07/91			
NM0020991	USDIBIA-PUEBLO PINTADO BOARDIN		9512	03/07/86	03/08/86	03/07/91			
NM0020818	USDIBIA-SANOSTEE BOARDING SCHO		9512	04/25/86	05/26/86	05/25/91			
NM0020982	USDIBIA-STANDING ROCK BOARDING		9512	04/25/86	05/26/86	05/25/91			
NM0020974	USDIBIA-TORREON BOARDING SCHOO		9512	03/07/86	03/08/86	03/07/91			
NM0020958	USDIBIA-WINGATE ELEMENTRY & HI		9512	04/25/86	05/26/86	05/25/91			
NM0021997	USDIBSFW-MESCALERO NAT FISH HA		9512	04/04/78	05/04/78	05/03/83			
NM0028193	UTAH INTERNATIONAL INC-NAVAJO		1211	12/16/86	12/17/86	12/16/91			
NM0028514	VALLE VISTA SEWER COMPANY, SAN		4952	03/08/85	04/09/85	04/08/90			
NM0028240	VALLEY ESTATES MUTUAL WATER &		4952	11/28/86	11/29/86	11/28/91			
NM0025399	VAN DER KROFF,LEO		0241	06/16/75	06/03/75	06/02/80			
NM0023141	VISSER,CORNELIOUS		0241	07/14/75	08/30/75	08/29/80			
NM0021369	WORLEY CATTLE CO.		0211	11/05/74	12/05/74	12/04/79			
NM0022454	WRIGHT DAIRY		0241	11/05/74	12/05/74	12/04/79			

SUB-TOTAL QUICK LOOK PRINT LINES: 206

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NPID	FNMS	MADI	SIC2	PERD	PEED	PERE	IADT	RDF7	RDF8
NM0025534	ROTHLISBERGER DAIRY		0241	02/21/75	04/11/75	04/10/80			
~~NM0029335~~	~~RUIDOSO, VILLAGE OF (PLANT#1)~~		~~4941~~	~~07/18/86~~	~~08/17/86~~	~~08/16/91~~			
NM0022965	RUIDOSO SUNLAND INC DBA RUIDOS		7948	11/25/75	01/11/76	01/10/81			
NM0029165	RUIDOSO-RUIDOSO DOWNS RWTP-LIN	M	4952	09/30/88	11/15/88	11/14/93		HILLER	GLADYS
~~NM0028533~~	~~RUIDOSO, VILLAGE OF-ALTO CREST~~		~~4941~~	~~06/27/86~~	~~06/26/86~~	~~06/27/91~~			
NM0029505	SAN JUAN COAL COMPANY - LA PLA		1211	04/11/86	05/12/86	05/11/91			
✓ NM0028746	SAN JUAN COAL COMPANY-SAN JUAN		1211	05/01/87	10/26/87	05/01/92			
NM0000027	SAN JUAN GRAVEL PRODUCTS COMPA		1442	04/29/74	05/01/74	04/30/79			
NM0028363	SAN MIGUEL CO.-OPERATION BREAK		4952	07/11/85	07/12/85	07/11/90		VAUGHN	GLADYS
NM0027863	SANDIA PEAK SKI CO-SANDIA PEAK		4952	08/17/87	08/18/87	08/17/92			
NM0022993	SANTA FE DOWNS		7948	02/11/75	03/28/75	03/27/80			
~~NM0022282~~	~~SANTA FE, CITY OF (CAPROCK LO~~	M	~~4952~~	~~06/16/86~~	~~06/17/86~~	~~06/16/91~~		HILLER	GLADYS
~~NM0027383~~	~~SANTA ROSA, CITY OF (EAST STP)~~		~~4952~~	~~02/03/75~~	~~03/21/75~~	~~03/20/80~~			
~~NM0024988~~	~~SANTA ROSA, CITY OF (MAIN STP)~~		~~4952~~	~~05/17/85~~	~~06/18/85~~	~~06/17/90~~			
NM0029581	SANTE FE PACIFIC COAL CORPORAT		1211	10/17/86	10/18/86	10/17/91			
NM0021385	SCHWARTZMAN PACKING CO.NSL-ALB		0211	02/21/75	04/11/75	04/10/80			
~~NM0020109~~	~~SILVER CITY, TOWN OF~~	M	~~4952~~	~~03/04/83~~	~~04/14/83~~	~~04/13/88~~		HILLER	GLADYS
NM0021466	SIMPSON FEEDYARD		0211	11/05/74	12/05/74	12/04/79			
NM0021431	SNYDER FEED LOT, INC.		0211	04/29/74	05/01/74	04/30/79			
~~NM0024035~~	~~SOCORRO, CITY OF #TP~~	M	~~4952~~	~~09/30/88~~	~~11/15/88~~	~~11/14/93~~		HILLER	GLADYS
NM0029131	SOUTHWESTERN PUB SERV CO-EDDY		4911	02/11/83	03/14/83	03/13/88			
NM0029050	ST CLOUD MINING CO-CHLORIDE		1211	05/15/87	06/16/87	06/15/92			
NM0000141	STAHMANN FARMS INC LAS CRUCES		0214	06/24/74	07/01/74	06/30/79			
~~NM0020525~~	~~SUNLAND PARK, CITY OF~~		~~4952~~	~~07/06/78~~	~~08/06/78~~	~~08/05/83~~			
~~NM0020954~~	~~SUNLAND PARK, CITY OF~~		~~6515~~	~~12/16/86~~	~~12/17/86~~	~~12/16/91~~		HYATES	GLADYS
~~NM0029483~~	~~SUNLAND PARK,CITY OF-SUNLAND P~~		~~4952~~	~~03/20/87~~	~~03/21/87~~	~~03/20/92~~			
NM0028151	SUNNYSIDE TRAILER PARK-GALLUP-		6515	06/09/76	07/17/76	07/16/81			
NM0022438	SUNSHINE DAIRY		0241	02/11/75	03/26/75	03/27/80			
NM0022683	SWAAGESTRA DAIRY		0241	11/25/75	01/11/76	01/10/81			
NM0023116	SWENSON FARMS		0241	06/18/75	08/03/75	08/02/80			
~~NM0024088~~	~~TAOS, TOWN OF~~	M	~~4952~~	~~09/23/88~~	~~10/24/88~~	~~10/23/93~~		HILLER	GLADYS
NM0028754	TENNESSEE VALLEY AUTH.	M	1094	09/14/84	10/16/84	10/15/89		PTEEL	GLADYS
NM0023124	TEPPESTRA,BAUER		0241	09/26/74	10/26/74	10/27/79			
NM0025453	THE SHERIFF'S POSSE, INC		0272	11/05/74	12/05/74	12/04/79			
NM0029467	TIM WATSON,INC.-ALBUQUERQUE,NE		4952	05/02/86	05/03/86	05/02/91			
~~NM0020681~~	~~TRUTH OR CONSEQUENCES, CITY OF~~	M	~~4952~~	~~03/15/84~~	~~03/16/84~~	~~03/15/89~~		HILLER	GLADYS
~~NM0020711~~	~~TUCUMCARI, CITY OF~~	M	~~4952~~	~~06/29/83~~	~~06/30/83~~	~~06/29/88~~		HILLER	GLADYS
NM0022101	TWINING COOPERATIVE ASSA	M	4952	09/23/88	10/24/88	10/23/93		HILLER	GLADYS
✓ NM0028576	U.S. DEPT. ENERGY-LOS ALAMOS		9511	09/14/79	10/15/79	06/30/83			
NM0021351	UNION CO. FEEDLOT, INC. DIV. O		0211	06/28/74	07/01/74	06/30/79			
NM0020401	UNITED NUCLEAR CORP-GALLUP	M	1094	10/14/83	11/15/83	11/14/88		PTEEL	GLADYS
NM0028550	UNITED NUCLEAR CORP-OLD CHURCH	M	1094	10/14/83	11/15/83	11/14/88		PTEEL	GLADYS
NM0028355	UNIVERSITY OF CALIFORNIA, OPER	M	4812	02/01/86	05/29/87	05/29/91		HILLER	GLADYS
NM0028169	URANIUM KING CORPORATION	M	1094	08/19/88	09/20/88	09/19/93		PTEEL	GLADYS
NM0024023	USDAFS-CARSON NATIONAL FOREST		9512	06/12/87	07/13/87	07/12/92			
NM0028678	USDI-NAVAJO DAM OUTLET WORKS &		4463	06/12/87	07/13/87	07/12/92			
NM0020869	USDIBIA-CRYSTAL BOARDING SCHOO		9512	05/14/74	06/01/74	05/31/79			
NM0021016	USDIBIA-LAKE VALLEY BOARDING S		9512	04/25/86	05/26/86	05/25/91			

NOT SURE IF THIS IS THE SAME AS SAN JUAN COAL MINE / NEAR FARMINGTON

SAN JUAN COAL MINE IS A GENERATOR OF D001

SEE ATTACHMENTS

QL

NPID	FIRMS	MADI	SIC2	PERD	PEED	PERE	IADT	KOF7	KOF8
~~NM0020303~~	~~LOS LUNAS, VILLAGE OF~~		~~4952~~	~~04/15/84~~	~~05/16/45~~	~~05/15/93~~		~~HILLER HELEN~~	
NM0029378	LOS RANCHOS DEL RIO SUBDIVISIO		4952	11/28/86	11/29/86	11/28/91			
NM0021725	MARLEY, ROBERT C.		0211	02/25/74	03/27/74	03/26/79			
NM0027995	MATERIALS INC-FARMINGTON		1442	06/14/78	07/15/78	06/30/82			
~~NM0021148~~	~~MAXWELL, VILLAGE OF~~		~~4952~~	~~01/10/85~~	~~01/11/85~~	~~01/06/91~~			
NM0023272	MCCATHARAN		0241	02/21/75	04/11/75	04/10/80			
NM0023051	MCILHANEY'S DAIRY-ALBUQUERQUE		0241	02/11/75	03/28/75	03/27/80			
NM0021181	MESA LIVESTOCK & COOPERATIVE		0211	11/05/74	12/05/74	12/04/79			
NM0028291	METRO BUILDERS, INC		4952	07/19/78	08/20/78	08/19/83			
NM0021695	MUCK FEEDERS-CLAYTON		0211	03/22/74	04/21/74	04/20/79			
√NM0022306	MOLYCORP INC - QUESTA	M	1061	05/20/86	06/21/88	06/20/93		HILLER GLADYS	SQG - F001
NM0021113	NUNHO DAIRY		0241	02/21/75	04/11/75	04/10/80			F013 - flotation tailings from selective flotation from metals recovery operation. (cyanide)
NM0021458	MURROW-MUNDY FEEDYARD		0211	05/18/75	08/03/75	08/02/80			
NM0029637	NATATORIUM (SWIMMING POOL)-LOS		7999	05/01/87	05/02/87	05/01/92			
NM0022951	NEW MEXICO FEEDERS INC		0212	11/19/74	12/19/74	12/18/79			
NM0000191	NEW MEXICO PUBLIC SERVICE CO.		4941	09/10/74	10/01/74	09/30/79			
√NM0025437	NEW MEXICO STATE UNIV		8221	02/21/75	04/11/75	04/10/80	GRANTS OR LAS CRUCES		
NM0024937	NM STATE PARK & RECREATION COM		9512	09/20/85	09/21/85	09/20/90			
NM0022691	OASIS DAIRY FARM-ROSWELL		0241	12/16/74	01/16/75	01/15/80			
NM0021130	OTHART, LEON		0241	02/11/75	03/28/75	03/27/80	ALL INFO. BASED ON LAS CRUCES	SEE ATTACHMENTS.	
NM0021288	PECOS VALLEY FEED YARD		0211	03/25/74	04/21/74	04/20/79			
~~NM0029041~~	~~PECOS VILLAGE OF~~		~~4952~~	~~10/14/83~~	~~11/15/88~~	~~11/14/93~~			
NM0029564	PERSON GENERATING STATION-ALBU		4911	11/28/86	11/29/86	11/28/91			
NM0000132	PLAINS ELECTRIC GENERATION & T		4911	05/15/87	06/16/87	06/15/92			
NM0028436	POJOAQUE TERRACES MOBILE HOME		6515	03/20/87	03/21/87	03/20/92		MTATES GLADYS	
NM0029408	PONDEROSA NAVAJO PARTICLEBOARD		2492	11/28/86	11/29/86	11/28/91			
NM0025461	PORKIES PLACE HOG FARM		0213	02/21/75	04/11/75	04/10/80			
NM0021873	PRICE BLACK FARMS		0211	10/12/74	11/11/74	11/10/79			
NM0021121	PRICE'S VALLEY GOLD		0241	09/28/74	10/28/74	10/27/79			
NM0022705	PRICES FARM		0241	02/21/75	04/11/75	04/10/80			
NM0022667	PRICES VALLEY GOLD DAIRIE		0241	10/12/74	11/11/74	11/10/79			
√NM0028606	PUBLIC SERVICE CO-SAN JUAN	M	4911	02/17/84	03/20/84	03/19/89		HILLER GLADYS	SQG - U002
√NM0000124	PUBLIC SERVICE OF NEW MEXICO-B		4911	12/26/86	01/27/87	01/26/92			U154
NM0020532	QUIVIRA MINING CO.-AMBROSIA LA	M	1094	08/19/88	09/20/88	09/19/93		PTEEL GLADYS	U122
NM0020524	QUIVIRA MINING COMPANY	M	1094	10/14/83	11/15/83	11/14/88		PTEEL GLADYS	SQG - Hazardous waste not known
NM0028207	QUIVIRA MINING COMPANY	M	1094	08/19/88	09/20/88	09/19/93		PTEEL GLADYS	
~~NM0023396~~	~~RAMAH, CITY OF (DWC & MSWA)~~		~~4952~~	~~07/18/86~~	~~07/19/46~~	~~07/14/91~~			
NM0021792	RANCHERS & FARMERS LS AUCTION		5154	11/25/75	01/11/76	01/10/81			
~~NM0020273~~	~~RATON CITY OF~~	M	~~4952~~	~~04/15/84~~	~~05/15/84~~	~~05/15/89~~		~~HILLER GLADYS~~	
NM0026522	RATON PUBLIC SERVICE CO		4952	01/29/88	01/30/88	01/29/93			
~~NM0024082~~	~~RED RIVER, VILLAGE OF~~		~~4952~~	~~07/31/83~~	~~08/01/83~~	~~07/31/88~~		~~PTATES HELEN~~	
NM0024163	RESERVE MUTUAL SEWER ASSOCIATI		4952	09/03/82	10/04/82	10/03/87		HILLER HELEN	
NM0027375	RIO DE ARENAS MOBILE MANOR		6515	07/15/76	08/15/76	08/14/81			
NM0028134	RIO PECOS VILLA HOMEOWNERS ASS		4952	04/07/76	05/21/76	05/20/81			
NM0029556	ROBERT'S OIL PUMP & SAVE-ALBUQ		5541	10/31/86	11/01/86	10/31/91			
NM0022365	ROMIG DAIRY FARM		0241	09/28/74	10/28/74	10/27/79			
NM0021857	ROSWELL LIVESTOCK COMM.		5154	09/28/74	10/28/74	10/27/79			
NM0020311	ROSWELL, NEW MEXICO"	M	4952	11/28/82	03/19/85	11/28/87		HILLER GLADYS	

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NPID	FNMS	MADT	SIC2	PERD	PEFD	PERE	IADT	RDF7	RDF8
NM0028843	EXXON MINERALS HYDROLOGIC PUMP		1481	03/25/80	04/26/80	09/30/80			
NM0029599	FARMINGTON ELECTRIC UTILITIES		4961	10/31/86	11/01/86	10/31/91			
NM0028258	FARMINGTON SAND & GRAVEL CO		1442	11/28/86	11/29/86	11/28/91			
~~NM0020583~~	~~FARMINGTON-HALEY, CITY OF~~	M	~~4952~~	~~01/24/86~~	~~01/25/86~~	~~01/24/91~~		~~HILLER GLADYS~~	
~~NM0000043~~	~~FARMINGTON, CITY OF~~		~~4911~~	~~08/30/85~~	~~11/01/86~~	~~09/24/90~~			
~~NM0000051~~	~~FARMINGTON, CITY OF~~		~~4941~~	~~04/16/74~~	~~10/01/74~~	~~04/30/79~~			
NM0021211	FLETCHER BROS.		0214	09/28/74	10/28/74	10/27/79			
~~NM0023477~~	~~FORT SUMNER, TOWN OF~~		~~4952~~	~~05/04/84~~	~~06/05/84~~	~~06/04/89~~		~~HILLER HELEN~~	
NM0029025	FOUTZ & FOUTZ INVESTMENT INC.		1521	03/29/85	05/02/85	05/01/90			
NM0028487	GADSDEN ISD-JR&SR HS-ANTHONY		8211	01/11/78	02/12/78	02/11/83			
~~NM0020672~~	~~GALLUP, CITY OF~~	M	~~4952~~	~~03/15/84~~	~~03/16/84~~	~~03/15/89~~		~~HILLER GLADYS~~	
NM0029475	GATEWAY MINE-SAN JUAN,NEW MEXI		1211	09/12/86	10/13/86	10/12/91			
✓NM0000159	GENERAL ELECTRIC CO-ALBUQUERQU		3724	03/14/78	04/14/78	12/31/80		BURREL	
NM0028088	GLORIETA BAPTIST CONFERENCE CE		8661	09/20/85	09/21/85	09/20/90			
✓NM0028711	GOLD FIELDS OPERATING CO- ORTI		1041	05/01/87	05/02/87	05/01/92		DWEEKS GLADYS	
~~NM0020737~~	~~GRANTS, CITY OF~~	M	~~4952~~	~~11/27/87~~	~~06/30/88~~	~~11/27/92~~		~~HILLER GLADYS~~	
NM0029394	GTE COMMUNICATION SYSTEMS CORP		3679	12/05/86	12/06/86	12/05/91			
NM0023191	HANDLEY DAIRY		0241	02/21/75	04/11/75	04/10/80			
NM0021261	HARSHEY,RICHARD		0211	11/05/74	12/05/74	12/04/79			
~~NM0020010~~	~~HATCH, VILLAGE OF~~		~~4952~~	~~04/23/74~~	~~03/01/83~~	~~02/27/88~~		~~HILLER HELEN~~	
NM0025500	HAYNIE,K.D.		0241	11/19/74	12/19/74	12/18/79			
✓NM0020389	HOMESTAKE MINING COMPANY	M	1094	05/20/88	06/21/88	06/20/93		PTEEL GLADYS	
NM0027732	HORIZON CORP.		4952	01/30/87	01/31/87	01/30/92			
NM0000116	IDEAL CEMENT CO-TIJERAS		3241	04/29/74	05/01/74	04/30/79			
NM0027774	INDIAN HILLS HOME PARK INC		6515	06/28/76	08/08/76	08/07/81			
NM0020613	INDIAN LAND-NAVAJO TRIBAL VA (		4952	03/12/75	04/25/75	04/24/80			
NM0020621	INDIAN LAND-NAVAJO TRIBAL VA (	M	4952	03/04/85	03/05/85	03/04/90		HILLER GLADYS	
NM0020630	INDIAN LAND-NAVAJO TRIBAL VA (		4952	08/08/85	08/09/85	08/08/90			
NM0023221	JARAMILLO FARMS		0241	02/21/75	04/11/75	04/10/80			
NM0023230	JARRATT,RAYMOND		0241	09/28/74	10/28/74	10/27/79			
NM0028479	JEMEZ SPRINGS ISD-JEMEZ VALLEY		8211	09/20/85	09/21/85	09/20/90			
~~NM0020711~~	~~JEMEZ SPRINGS, VILLAGE OF~~		~~4952~~	~~01/22/85~~	~~01/23/85~~	~~01/22/90~~			
NM0023248	JONES,O.C.		0241	02/21/75	04/11/75	04/10/80			
~~NM0029459~~	~~KAISER OIL CORPORATION - KATON~~		~~1211~~	~~05/02/86~~	~~05/03/86~~	~~05/02/91~~			
✓NM0000205	KAISER STEEL CORP.		1211	06/21/85	04/05/86	07/21/90	→ SQG- D001		
NM0025551	KLEINS DAIRY		0241	11/05/74	12/05/74	12/04/79			
NM0022012	KUYKENDALL,M.L.		0241	06/18/75	06/03/75	06/02/80			
NM0027969	LA MESA RACE TRACK		7948	02/11/75	03/28/75	03/27/80			
NM0021539	LANGENEGGER FEED YARD		0211	11/05/74	12/05/74	12/04/79			
NM0021156	LANKFORD FEED PENS		0241	09/28/74	10/28/74	10/27/79			
~~NM0023311~~	~~LAS CRUCES, CITY OF~~	M	~~4952~~	~~03/16/84~~	~~01/28/74~~	~~04/15/88~~		~~HILLER GLADYS~~	
~~NM0020627~~	~~LAS VEGAS, CITY OF (SOUTH EAST M~~		~~4952~~	~~06/17/85~~	~~07/18/85~~	~~07/17/90~~		~~HILLER GLADYS~~	
NM0025429	LIEFESTE DAIRY		0241	09/28/74	10/28/74	10/27/79			
NM0020141	LOS ALAMOS COUNTY (BAYO CANYON		4952	04/29/74	04/05/83	04/04/88		MTATES HELEN	
NM0020125	LOS ALAMOS COUNTY (PUEBLO CANY		4952	05/03/74	03/01/83	02/29/88		MTATES HELEN	
NM0020133	LOS ALAMOS COUNTY (WHITE ROCK)		4952	01/07/83	02/07/83	02/06/88		MTATES HELEN	
NM0028991	LOS ALAMOS COUNTY UTILITIES		4911	09/20/85	09/21/85	09/20/90			
NM0028851	LOS LUNAS CORRECTIONAL COMPLEX		9223	01/23/87	02/24/87	02/23/92			

As per file documentation, listed as generator but NO hazardous waste generated.

RCRA Waste Code list:
F001 F005 U002 U239
F002 U013
F003 U159
D001 U220
D002

RCRA Waste Code list:
F014 P021 P106 RCRA
F015 P030 U159 EXEMPT
D003 P098

RCRA lists 6 companies under the name Homestake Mining Co.
NMD000804369 NMD000804401
NMD000804377 NMD007860935
NMD000804385
NMD000804393

All are located in Grants, NM. It is uncertain as to which one has NPDES Permit.
All are RCRA Exempt.

NMD000804401 operates an ion exchange facility. Associated w/ the facility is a settling pond where barium chloride is added to the discharge water to remove Radium. The barium combines with sulfate

Waste Code list for NMD007860
U002 U056 U144 U196
U019 U112 U154 U218
U044 U134 U161

QL ********** QL

FORM 3413-3

NPID	FNMS	MADI	SIC2	PERD	PEED	PERE	IADT	RDF7	RDF8	Waste Code			
NM0029602	ALBUQUERQUE UTILITIES CORP,WWT		4952	02/19/88	03/20/88	03/19/93							
NM0027987	ALBUQUERQUE UTILITIES INC-RIO		4952	02/05/76	03/20/76	03/19/81							
~~NM0022250~~	~~ALBUQUERQUE, CITY OF (WWTP-2)~~	~~M~~	~~4952~~	~~05/20/86~~	~~07/21/85~~	~~07/20/91~~		~~HILLER~~	~~GLADYS~~				
NM0028819	ALTO DE LAS FLORES MONCA-SAN	M	4952	03/08/85	04/09/85	04/08/90							
NM0020460	AMERICAN SMELT & REF CO-PORT N		3312	02/21/75	03/28/75	03/27/80							
NM0029629	ANTHONY WATER & SANITATION DIS		4952	08/28/87	09/29/87	09/28/92							
✓ NM0000019	ARIZONA PUBLIC SERV-FOUR CORNE	M	4911	03/17/88	03/18/88	03/17/93		MTATES	GLADYS	F001	D001	D009	RCRA Waste Code list
~~NM0022268~~	~~AZTEC, CITY OF~~	~~M~~	~~4952~~	~~09/30/86~~	~~11/15/88~~	~~11/14/93~~		~~HILLER~~	~~GLADYS~~	F002	D002		
NM0000078	ATCHISON TOPEKA SANTA FE RAILW		4011	05/23/86	06/24/86	06/23/91		DWEEKS	GLADYS	F003	U013		
NM0000086	ATCHISON TOPEKA SANTA FE RAILW		4011	09/25/87	10/26/87	10/25/92		DWEEKS	GLADYS	F005	D008		
~~NM0020168~~	~~AZTEC, CITY OF~~		~~4952~~	~~01/22/55~~	~~01/23/55~~	~~01/22/90~~				F004			
NM0028665	B & C FEED CO.-RIO ARRIBA CO.		5191	05/23/79	06/30/79	05/29/84							
NM0022462	B-K FARM-ANTHONY		0241	09/06/74	10/01/74	09/30/79							
NM0029289	BAPTIST SUNDAY SCHOOL BOARD-GL		4952	11/28/86	11/29/86	11/28/91							
NM0021164	BARNETT FEED YARDS INC-HAGERMA		0211	11/05/74	12/05/74	12/04/79							
~~NM0020150~~	~~BELEN, CITY OF~~	~~M~~	~~4952~~	~~09/23/88~~	~~10/24/88~~	~~10/23/93~~		~~HILLER~~	~~GLADYS~~				
~~NM0024805~~	~~BERNALILLO, CITY OF~~		~~4952~~	~~03/25/88~~	~~04/26/88~~	~~04/25/93~~		~~HILLER~~	~~HELEN~~				
NM0028142	BLOOMFIELD MUNICIPAL SCHOOLS-B		8211	11/28/86	08/29/87	08/28/91							
~~NM0020770~~	~~BLOOMFIELD, CITY OF~~		~~4952~~	~~09/30/88~~	~~11/15/88~~	~~11/14/93~~		~~HILLER~~	~~HELEN~~				
NM0025607	BLYTHE,ROBERT AND JAY		0212	11/05/74	12/05/74	12/04/79							
NM0021199	BOGLE FARMS, INC.		0211	09/28/74	10/28/74	10/27/79							
NM0028215	BOKUM RESOURCES CORP-MARQUEZ M	M	1094	05/20/88	06/21/88	06/20/93		PTEEL	GLADYS				
NM0029157	BOLIDEN MINERALS, INC-GRANT CO		1021	05/15/87	10/26/87	06/15/92							
NM0022675	BRIGHT STAR DAIRY		0241	11/25/75	01/11/76	01/10/81							
NM0025585	BUNSTERFF,IRA		0241	03/12/75	04/25/75	04/24/80							
NM0029262	BUREAU OF RECLAMATION, USDI-CA		9199	05/15/84	05/16/84	05/15/89							
NM0029530	CARBON COAL COMPANY #2 MINE-GA		1211	10/17/86	10/18/86	10/17/91							
NM0029521	CARBON COAL COMPANY MENTMORE M		1211	10/17/86	10/18/86	10/17/91							
~~NM0024295~~	~~CARLSBAD, CITY OF~~	~~M~~	~~4952~~	~~03/04/85~~	~~03/05/85~~	~~03/04/90~~		~~HILLER~~	~~GLADYS~~				
~~NM0027731~~	~~CHAMA, CITY OF~~		~~4952~~	~~02/03/75~~	~~03/21/75~~	~~03/20/90~~		~~VAUGHN~~	~~HELEN~~				
NM0021229	CHAVES COUNTY CATTLE CORP		0211	11/05/74	12/05/74	12/04/79							
NM0028100	CHEVRON RESOURCES CO-MT TAY	M	1094	06/17/88	07/18/88	07/17/93		BURREL	GLADYS				
✓ NM0020435	CHINO MINES CO-HURLEY	M	1021	08/01/85	08/02/85	08/01/90		BURREL	GLADYS	D002			RCRA EXEMPT
NM0021521	CLAYTON CATTLE FEEDERS,		0211	11/05/74	12/05/74	12/04/79				K064			
NM0028061	CLOUD 9 LTD-UTERO		4952	12/20/76	01/23/77	01/22/82				F120			
~~NM0023370~~	~~CLOUDCROFT, CITY OF~~		~~4952~~	~~04/29/74~~	~~05/01/74~~	~~04/30/79~~							
NM0021253	CLOVIS FEED YARDS, INC.		0211	11/05/74	12/05/74	12/04/79							
NM0026476	COBB NUCLEAR CORP.-PATTERSON M		4931	11/27/75	12/27/75	12/26/80							
~~NM0024911~~	~~CUCHILLO LAKE, TOWN OF~~		~~4952~~	~~11/05/74~~	~~12/05/74~~	~~12/04/79~~							
NM0028584	CONSOLIDATION COAL CO-CON PASO		1211	10/31/86	11/01/86	10/31/91							
NM0023027	CORNELIUS DEGRAFF		0241	02/21/75	04/11/75	04/10/80							
NM0025615	CORTESE,RALPH		0213	02/21/75	04/11/75	04/10/80							
~~NM0024848~~	~~CUBA, VILLAGE OF~~		~~4952~~	~~12/06/82~~	~~04/14/83~~	~~04/13/88~~		~~MTATES~~	~~HELEN~~				
NM0028657	CUBA, VILLAGE OF-WATER TREATME		4941	03/25/80	04/26/80	04/25/85							
NM0029432	DE-NA-ZIN MINE-SAN JUAN,NEW ME		1211	07/31/87	08/01/87	07/31/92							
NM0022446	DESERT HILLS DAIRY-MESQUITE		0241	11/19/74	12/19/74	12/18/79							
✓ NM0000108	EL PASO ELECTRIC		4911	05/13/87	04/14/87	04/13/92							
~~NM0024651~~	~~EL PASO, CITY OF~~ "	M	~~4952~~	~~08/08/85~~	~~08/09/85~~	~~08/08/90~~		~~HILLER~~	~~GLADYS~~	F002			SQG (Small Quantity Generator
										F004			
										D001			

~~file documentation~~

Cadmium, Chromium and lead
IRON, COPPER, Mercury
AMMONIA Sodium bromate solution
Hydrochloric acid
citric acid solution
Hydroxyacetic / formic acid solut
Asbestos } shipped off-site
PCB's }

New Mexico Health and Environment Department

CARLA L. MUTH
Secretary

MICHAEL J. BURKHART
Deputy Secretary

RICHARD MITZELFELT
Director

February 17, 1989

Mr. Paul Conner
Program Development Branch
Office of Water Enforcement and Permits (EN-336)
401 M Street, SW
Washington, DC 20460

Dear Mr. Conner:

The Environmental Improvement Division of the New Mexico Health and Environment Department submits the following responses to the proposed rule amendments to 40 CFR Parts 122, 123, and 130 published on January 12, 1989.

While there are several comments on specific points of this proposal discussed below, there are also two comments of a general nature we must make. First, the Water Quality Act of 1987, passed on February 4, 1987, specifically required the States to submit final 304(1) lists "Not later than 2 years after the date of the enactment". Consequently, the statements listed throughout this proposed rule which insist that States meet the additional requirements of this proposal to be approvable are nonsensical. It is unreasonable to expect proposed material published less than one month prior to the statutory deadline to have any bearing on final lists. Notwithstanding the suggestion that the States accept this proposal as guidance until codification, we will not accept the additional requirements as necessary to fulfill statutory requirements. EPA guidance has no statutory or regulatory authority. Consequently, we would not recognize EPA disapproval of final 304(1) lists on any basis other than that specifically mandated in the Act. Secondly, the Environmental Improvement Division, on February 6, 1989, requested an additional 90 days to review this proposal. The single week extension granted does not recognize the potential impacts of this proposal on State programs. EPA's current haste to promulgate these regulations, 23 months after enactment of Section 304(1), will lead to additional disagreements between EPA and the States.

Individual items of concern are identified below.

Item 1. Information on p. 1304 explaining proposed subparagraph (v) amending CFR 122.44(d)(1) specifically references the requirement that a State adopt water quality standards which include an antidegradation policy. What is the purpose of including the reference to the antidegradation

— ENVIRONMENTAL IMPROVEMENT DIVISION —
Harold Runnels Building
1190 St. Francis Dr.
Santa Fe, New Mexico 87503

policy? Are we to assume that the proposed language on p. 1319 is intended to insure enforcement of the antidegradation policy? Please advise.

Item 2. Information on pp. 1309-1310 concerning review of lists by EPA states that "In order for EPA to complete its review of a State's lists, the State must have met the data and documentation requirements in the proposed paragraphs...." As has already been explained, this requirement is without merit and should be deleted.

Item 3. Information on p. 1310 in the discussion on "Authority to Require Biennial Submission of Lists" indicates that EPA has approval authority for the 305(b) report. There is nothing in Section 305(b) of the Act or in 40 CFR 130 granting EPA such authority.

Item 4. Information on p. 1311 concerning data requirements and the list of required screens on p. 1321 documents EPA's intent that the entire 304(1) review process be repeated every two years as one element of the mandated 305(b) report. It is essential that EPA recognize the significant expenditure of limited resources this will place on the States. Over one and one-half person years went into completing the 304(1) process. When coupled with the mandated requirements of Section 305(b), a minimum of four person years will be expended on 305(b) every two years. Even without the additional burden of the proposed inclusion of Section 314(a)(2) reports becoming required components of the 305(b) report, this new requirement must be considered an excessive burden.

Item 5. The proposed requirement listed on p. 1311 states "In addition, proposed subparagraph (iv) requires the State to provide any other information that the Regional Administrator requests in order to review the State's submission of lists..." This could lead to an excessive burden being placed on the States. Recent experience has shown that such "documentation" may require turning any given report or review into a paper monolith. There must be some limitation on the amount of justification that is necessary. EPA must refine proposed language at 130.7(b)(6) to insure that demands for information are limited to that necessary and pertinent to the determination of the adequacy of the States' reports.

Item 6. The language on p. 1316 concerning EPA review of submitted lists states "If the waterbody meets the criteria described in the proposed regulations at 130.10(d) of today's rulemaking, then EPA will approve the State's decision to list that waterbody...." We must once again insist that this language be struck.

Item 7. The statement on p. 1317 "State public participation procedures must, at a minimum, provide for public notice and an opportunity

to comment on the State's lists and ICSs..." goes well beyond the requirements of the Act. There is nothing in the Act that requires public participation in the development or review of the lists. In that EPA has identified the NPDES permit as the measure of acceptibility for ICSs, then the normal publication/review process associated with the NPDES permit process should be considered adequate.

Item 8. EPA's statement on p. 1317 "Under section 304(1)(3), EPA will consider for listing any navigable water for which any person submits a petition to EPA..." is in error. Application of Section 304(1)(3) is statutorily restricted to those occasions in which "...a State fails to submit control strategies...or the Administrator does not approve the control strategies submitted by such State...." Consequently, additional waters can only be listed when the States have failed to produce acceptable NPDES permits or, for nondelegated States, when they fail to produce acceptable total maximum daily loads/wasteload allocations for EPA's use in the NPDES process.

Item 9. The terms "threatened", "potential", and "suspected" are used many times throughout this proposal. These terms should be defined if they are to become required criteria.

If you have any questions feel free to call Mr. Jim Piatt of my staff at (505) 827-2828.

Sincerely,

Kathleen M. Sisneros

Kathleen M. Sisneros
Chief
Surface Water Quality Bureau

xc: Russell Bowen (6W-QS)
Jim Piatt, Planning Section

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202-2733

May 30, 1990

MEMORANDUM

SUBJECT: Analysis of TRI Data for POTWs in New Mexico

FROM: James F. Pendergast
Chief, Toxics Control Section

TO: 304(l) New Mexico File

NRDC requested that we add POTWs where their industrial users report priority pollutant data in the TRI list. We ran an analysis of every POTW by comparing calculated effluent concentrations to state standards or Gold Book criteria in the absence standards. If the effluent exceeded the criteria or standards, we ran stream dilution calculations. In some cases, there was no NPDES permit application which indicated no point source to water; in other cases, the permit application showed no industrial user or detectable pollutants from that user.

Attached is the analysis for every industrial user listed in the TRI database. No POTW was found to cause an exceedance of the applicable standard based on the industrial user contribution.

Attachment

Toxics Release Inventory Data for Discharges to POTWs
Data from NRDC Data Pull

Annual Loading (lbs/yr)	Priority Pollutant	Industrial Discharger	Results of Analysis
** Dischargee to City of Bartlesville OK			
1	Chromium	TRW Reda Pipe	Effluent screen
4	Copper	TRW Reda Pipe	Effluent screen
6	Nickel	TRW Reda Pipe	Effluent screen
** Dischargee to City of Chickasha OK			
250	Dichloromethane	Pet Incorporated Grocery	Effluent screen
** Dischargee to City of Davis OK			
850	1,1,1-Trichloroethane	Halliburton Services	Effluent screen
** Dischargee to City of Duncan OK			
850	1,1,1-Trichloroethane	Halliburton Services	Effluent screen
** Dischargee to City of Oklahoma City OK			
850	1,1,1-Trichloroethane	Detot Flow Control	Permit screen
59	1,1,1-Trichloroethane	General Motors	Permit screen
9	Toluene	Firestone Tire	Permit screen
150	Toluene	General Motors	Permit screen
450	Zinc	General Motors	Permit screen
** Dischargee to City of Shawnee OK			
7	Copper	Wolverine Tube	Effluent screen
** Dischargee to City of Stillwater OK			
210	Copper	National Standard	Effluent screen
180	Lead	National Standard	Effluent screen
** Dischargee to City of Tulsa OK			
203	1,1,1-Trichloroethane	Thomas and Betts	Effluent screen
10	Chromium	International American	Effluent screen
298	Copper	Thomas and Betts	Effluent screen

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202-2733

May 31, 1990

MEMORANDUM

SUBJECT: Analysis of TRI Industrial Data for New Mexico

FROM: James F. Pendergast JP
Chief, Toxics Control Section

TO: 304(l) New Mexico File

NRDC requested that we add industrial facilities reporting priority pollutant data in the TRI list if dilution calculations project an exceedance of state standards or Gold Book criteria. The TRI data showed no industrial facilities reporting priority pollutants in New Mexico.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TEXAS 75202-2733

May 29, 1990

MEMORANDUM

SUBJECT: TRI Analysis for Albuquerque, NW

FROM: James F. Pendergast
Chief, Toxics Control Section (6W-PT)

TO: 304(l) ~~Texas~~ File

NRDC requested that we add all facilities reporting priority pollutant data in the TRI list if dilution calculations project an exceedance of state standards or Gold Book criteria. I ran the calculations for the industries discharging into the Albuquerque POTW. This plant receives 1,1,1-Trichloroethane from two facilities. The dilution calculation at the 7Q10 flow shows no potential excursion above the Gold Book criterion.

Load = two facilities, both estimating 250 lb/yr, because of estimate, use 250 lb/yr for total
Flow = 2.1 cfs
Criterion = 18,000 ug/l from Gold Book

Calculation: $\frac{250 \times 1000}{365 \times 2.1 \times 5.39} = 60$ ug/l

DRAFT

WATERBODY ARROYO CHICO & TRIBUTARIES

C. B list: EPA has found that the state failed to list this water under the criteria of §304(1)(1)(B). The water is not reasonably expected to achieve the applicable water quality standard for the following toxic pollutant(s) discharged entirely or substantially from point sources:

Numeric standards: (Include standard)*

SELENIUM: 50 ug/L

WATER QUALITY CRITERIA, 1972 EPA-R-73-033

Narrative standard: (Include pollutants)

EPA CRITERION

Identify whether a State criterion or an EPA criterion.

✓ (1) EPA specifically disapproves the state's finding that the impairment was not entirely or substantially due to point sources, because:

_____ (a.) Water quality-based limits on point sources would result in achievement of the standard, or

✓ (b.) The discharge from point sources would alone be sufficient to exceed the applicable water quality standard, or

_____ (c.) The point source contribution is large enough that the water quality standard may be exceeded and additional point source controls are needed.

_____ (2) EPA finds that the state did not evaluate all existing and readily available data, specifically the following category (categories)

_____

_____

_____

and, upon request, did not provide a good cause for failing to evaluate such data.

Comments:

FINDING BASED ON DATA RECEIVED AS PER THE REQUIREMENTS OF THE JUNE 1989 308 ORDER FOR INFORMATION ISSUED TO CHEVRON RESOURCES, NPDES PERMIT # NM1002810O

DRAFT

WATERBODY Arroyo Chico
Chevron's Mt Taylor Mine

____ **C. B list:** EPA has found that the state inappropriately failed to list this water under the criteria of §304(1)(1)(B). The water is not reasonably expected to achieve the applicable water quality standard for the following toxic pollutant(s) discharged entirely or substantially from point sources:

Numeric standards: (Include standard)

_____

_____

Narrative standard: (Include pollutants)

Se - Fish & livestock & wildlife water

_____

_____ ✓ (1) EPA specifically disapproves the state's finding that the impairment was not entirely or substantially due to point sources, because:

_____ (a.) Water quality-based limits on point sources would result in achievement of the standard, or

_____ (b.) The discharge from point sources would alone be sufficient to exceed the applicable water quality standard, or

_____ ✓ (c.) The point source contribution is large enough that the water quality standard may be exceeded and additional point source controls are needed.

_____ (2) EPA finds that the state did not evaluate all existing and readily available data, specifically the following category (categories)

_____

_____

_____

and, upon request, did not provide a good cause for failing to evaluate such data.

Comments:

Mine DMRs - Se exceedance EPA criteria for livestock watering
The State recommendation to remove the Se limit is [illegible]
Attainable use in arti[illegible]ally created perennial streams requires protection under "general standard" (including section 1).